PROJECT MANAGEMENT PLAN

Illinois River Basin Restoration, Illinois

Section 519, WRDA 2000

Feasibility Study

Prepared by

U.S. Army Corps of Engineers

Rock Island District

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Project Management Plan

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1 Project Map
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List of Acronyms

BMP	Best Management Practice
CEFMS	Corps of Engineers Financial Management System
CG	Construction General
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program
DNR	Department of Natural Resources
DOT	Department of Transportation
DPR	Definite Project Report
EA	Environmental Assessment
EC	Engineering Circular
EIS	Environmental Impact Statement
EMP	Environmental Management Program see also (UMR-EMP)
EQIP	Environmental Quality Incentives Program
ER	Engineering Regulation
FCSA	Feasibility Cost Sharing Agreement
FSA	Farm Service Administration
FY	Fiscal Year (Federal FY runs 1 October – 30 September)
GI	General Investigations
GIS	Geographic Information Systems
HTRW	Hazardous, Toxic, and Radioactive Waste
ICPTS	Illinois Conservation Practices Tracking System
IDA	Illinois Department of Agriculture
ILDNR	Illinois Department of Natural Resources
IEPA	Illinois Environmental Protection Agency
ILRDSS	Illinois River Decision Support System
INHS	Illinois Natural History Survey
ISGS	Illinois State Geological Survey
ISWS	Illinois State Water Survey
ITR	Independent Technical Review
LERRD	Lands, Easements, Rights-of-way, Relocations and Disposal Areas
LRC	Corps – Chicago District
LRD	Corps – Lakes and Rivers Division
MVD	Corps – Mississippi Valley Division
MVR	Corps – Rock Island District
MVS	Corps – St. Louis District
NAS	Network Analysis System
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
P&S	Plans and Specifications
PCA	Project Cooperation Agreement
PDA	Project Design Agreement
PDT	Product Delivery Team
PED	Preconstruction Engineering & Design
PM	Project Manager
PMP	Project Management Plan
POC	Point of Contact
PRB	Project Review Board
PROMIS	Project Management Information System
QA/QC	Quality Assurance/Quality Control
QCP	Quality Control Plan
QCT	Quality Control Team
RAM	Responsibility Assignment Matrix
RNA	Restoration Needs Assessment
SACCR	Schedule and Cost Change Request
SM	Study Manager
SOP	Standard Operating Procedure
UMR-EMP	Upper Mississippi River – Environmental Management Program
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VE	Value Engineering Study
WBS	Work Breakdown Structure
WHIP	Wildlife Habitat Incentives Program
WRDA	Water Resources Development Act

Glossary

Restoration – The objective of ecosystem restoration is to restore degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition (ER 1105-2-100). As defined under Section 519 in its broadest usage, restoration encompasses the following concepts: conservation, enhancement, naturalization, preservation, protection, rehabilitation, restoration, and stabilization.

Conservation – A careful preservation and protection of something; esp. planned management of a natural resource to prevent exploitation, destruction, or neglect. Webster's 1986.

Enhancement – In the context of restoration ecology, any improvement of a structural or functional attribute. National Research Council 1992.

Naturalization – To restore various components (magnitude, frequency, duration, timing, and rate of change) of a natural flow regime. Poff et al. 1997.

Preservation – Keep safe from injury, harm, or destruction. Webster's 1986.

Rehabilitation – Used primarily to indicate improvements of a visual nature to a natural resource; putting back into good condition or working order. National Research Council 1992.

Restoration – Return of an ecosystem to a close approximation of its condition prior to disturbance. National Research Council 1992.

Stabilization – Develop forces that restore the original condition when disturbed from a condition of equilibrium or steady motion. Webster's 1986.

From:

National Research Council, Committee on Restoration of Aquatic Ecosystems: Science, Technology, and Public Policy. 1992. Restoration of Aquatic Ecosystems: Science, Technology, and Public Policy. National Academy Press, Washington D.C.

Poff, N. L., J. D. Allan, M. B. Bain, J. R. Karr, K. L. Prestegaard, B. D. Richter, R. E. Sparks, and J. C. Stromberg. 1997. The natural flow regime. Bioscience 47:769-784.

Project Management Plan

Illinois River Basin Restoration, Illinois
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1.0 INTRODUCTION

This Project Management Plan (PMP) for Illinois River Basin Restoration of the Illinois River Watershed, Illinois, was prepared in accordance with U.S. Army Corps of Engineers guidance contained in Engineering Circular (EC) 1105-2-208 and Engineering Regulation (ER) 1105-2-100. The PMP was developed by the Rock Island District of the U.S. Army Corps of Engineers and the Illinois Department of Natural Resources (non-Federal sponsor) and will be modified based on negotiations with both sponsors for the study.

The PMP details the scope, schedule, and budget for project tasks as well as the division of responsibilities for accomplishment by the Rock Island, St. Louis, and Chicago Districts of the Corps of Engineers and the Illinois Department of Natural Resources who will cooperate closely with the Illinois Department of Agriculture and Illinois Environmental Protection Agency and collectively represent the State of Illinois as the non-Federal sponsor. A detailed work description, cost-summary table, and preliminary schedule outlining the initiation and completion of tasks by the Corps and the sponsor(s) are included in the PMP.

The purpose of the PMP is to present a plan to meet the requirements of Section 519 of the Water Resources Development Act (WRDA) 2000 for Illinois River Basin Restoration. These requirements include a Comprehensive Plan and identification, evaluation, and implementation of Critical Restoration Projects. Specific Comprehensive Plan components to be addressed include: the development and implementation of a long-term resource monitoring program and computerized inventory and analysis system; development and implementation of innovative sediment removal, characterization, and beneficial use options; and summarization of Illinois River transportation and economic information and related evaluations outlining the system needs and development of a restoration program. Further, restoration of the Illinois River Basin requires the identification and implementation of projects, within the watershed and along the course of the river, that repair past and ongoing ecological damage so that a more highly functioning, self-regulating ecosystem can develop within the existing basin context. Critical Restoration Projects will produce immediate habitat or sediment reduction benefits; in combination with monitoring will help evaluate the effectiveness of various restoration methods before application system wide; and will make best use of the strong, current local and State interest in ecosystem restoration within the Basin.

This PMP was developed to complete the project tasks in Fiscal Year (FY) 2002 and FY03 under the assumption of full funding of expressed FY03 capability ($5 million Federal). However, if less funding is allocated, this same PMP and tasks could be completed over a longer period of time. It is assumed that this PMP will be updated in FY03 to cover FY04.

2.0 STUDY BACKGROUND

The Illinois River has long been an important environmental and economic resource to the State of Illinois and the Nation as a whole. This importance led Congress to recognize the Illinois River as part of the Upper Mississippi River System as a unique nationally significant ecosystem and a nationally significant commercial navigation system in Section 1103 of WRDA 1986. Also, the National Research Council identified the Illinois River as a nationally significant floodplain river with excellent prospects for restoration.

The State of Illinois also recognizes the important resource that the Illinois River Basin represents. The Offices of the Governor and Lt. Governor have led efforts to focus attention on the Illinois River, including completing an *Integrated Management Plan for the Illinois River Watershed* and proposing "Illinois Rivers 2020," a $2.5 billion, 20-year State and Federal initiative to restore the Illinois River. The State of Illinois has committed itself to restoration activities in the Basin by leading planning efforts and enacting legislation aimed at basin restoration. The State has supported restoration efforts through the most successful Conservation Reserve Enhancement Program (CREP) in the Nation and numerous locally led watershed planning initiatives. In addition, local groups strongly support and have been active in pursuing restoration in the Basin.

Development of a Comprehensive Plan and Critical Restoration Projects described in this PMP were called for in Section 519 of WRDA 2000. These efforts will be developed using information from the complementary Illinois River Ecosystem Restoration Feasibility Study and additional Illinois River Basin Restoration Section 519 efforts described in this document.

The objective of ecosystem restoration is to restore degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition (ER 1105-2-100). Restoration as defined under Section 519 in its broadest usage encompasses the following concepts: conservation, enhancement, naturalization, preservation, protection, rehabilitation, restoration, and stabilization (see glossary for further definitions).

The purpose of the Comprehensive Plan is to identify restoration needs within the Basin in a manner consistent with Federal planning requirements and congressional authority. The ongoing Illinois River Ecosystem Restoration Feasibility Study effort will identify problems and opportunities, define existing and future without conditions in the Basin, develop a consensus-based desired future condition and evaluate the need for restoration, document resource significance, formulate alternatives at the system level to determine Federal interest and level of effort required, and develop a restoration program and prioritization process. Section 519 funding will be used to conduct the activities described in this document and address Comprehensive Plan requirements from that legislation including: (1) the development and implementation of a program for sediment removal technology, sediment characterization, sediment transport, and beneficial uses of sediment; (2) the development and implementation of a program for the planning, conservation, evaluation, and construction of measures for fish and wildlife habitat conservation and rehabilitation, and stabilization and enhancement of land and water resources in the Basin; (3) the development and implementation of a long-term resource monitoring program; (4) the development and implementation of a computerized inventory and analysis system; (5) summarization of Illinois River transportation and economic information; and (6) improvement in planning tools for watershed assessments, characterizing ecosystem project benefits restoration techniques.

The six Critical Restoration Projects identified through the Illinois River Ecosystem Restoration Study will be the first Critical Restoration Projects investigated under Section 519. These efforts were identified by the Illinois Department of Natural Resources through a basin-wide evaluation process, represent a range of project types addressing the major system problems, and have local interest and support. Each Critical Restoration Project will be evaluated through a separate decision document (similar to the Environmental Management Program's Definite Project Reports). The evaluations will define benefits such as habitat units created, stream miles of connectivity, tons of sediment reduced, and other measures. Cost Effective and Incremental Cost Analysis will be used to evaluate the benefits and costs of various project alternatives and to identify a recommended plan. For any recommended plan, the evaluations must show that the outputs of each project outweigh its respective costs.

Implementation guidance for Section 519 directed that the first action to be completed must be an initial assessment. The purposes of the initial assessment were to: (1) identify watershed needs and present a framework to develop and implement a Comprehensive Plan including long-term resource monitoring; and (2) identify procedures and responsibilities for the identification and evaluation of Critical Restoration Projects.

The Initial Assessment, completed in February 2002 with final revisions in May 2002, concluded that the Illinois River Basin is a nationally significant floodplain river ecosystem in need of restoration. Opportunities for restoration have strong support from local, State, and Federal agencies and organizations. Initial efforts should be undertaken in three areas specified in Section 519: (1) Comprehensive Plan, (2) Critical Restoration Projects, and (3) Long Term Resource Monitoring. The requirement for a Comprehensive Plan will be met largely through the ongoing efforts of the Illinois River Ecosystem Restoration Feasibility Study. Comprehensive Plan tasks not covered in that effort include the development and implementation of a long-term resource monitoring plan and computerized inventory and analysis system; development and implementation of innovative sediment removal, characterization, and beneficial use options; summarization of Illinois River transportation and economic investment; and other related evaluations summarizing system needs and restoration options. These items should be funded under Section 519. The Critical Restoration Projects will initially include six ongoing investigations identified through the Illinois River Ecosystem Restoration Feasibility Study, with additional potential projects identified through the planning process presented in that document. Similarly, the Corps should initiate long-term system monitoring tasks, which are clearly needed to improve understanding of the system's problems and needs and enhance the success of future projects.

2.1 Study Authority

The Illinois River Basin Restoration Project is being initiated under the Corps of Engineers' General Investigation Program. The project was initiated pursuant to the provision of funds in the Energy and Water Development Appropriations Act of 2002. The project, authorized under Section 519 of the Water Resources Development Act of 2000, includes a Comprehensive Plan and Critical Restoration Project components.

Comprehensive Plan

The Secretary shall develop, as expeditiously as practicable, a proposed Comprehensive Plan for the purpose of restoring, preserving, and protecting the Illinois River Basin…The Comprehensive Plan shall provide for the development of new technologies and innovative approaches to: (1) enhance the Illinois River as a vital transportation corridor; (2) improve

water quality within the entire Illinois River basin; (3) restore, enhance, and preserve habitat for plants and wildlife; (4) increase economic opportunity for agriculture and business communities…The Comprehensive Plan shall include such features as are necessary to provide for: (1) the development and implementation of a program for sediment removal technology, sediment characterization, sediment transport, and beneficial uses for sediment; (2) the development and implementation of a program for the planning, conservation, evaluation and rehabilitation, and stabilization and enhancement of land and water resources in the basin; (3) the development and implementation of a long-term resource monitoring program; (4) the development and implementation of a computerized inventory and analysis system.

Critical Restoration Projects

If the Secretary, in cooperation with appropriate Federal agencies and the State of Illinois, determines that a restoration project for the Illinois River Basin will produce independent, immediate and substantial restoration, preservation, and protection benefits, the Secretary shall proceed expeditiously with the implementation of the project.

2.2 Location of the Study Area

The Illinois River Basin is defined in Section 519 of WRDA 2000 as the Illinois River, Illinois, its backwaters, its side channels, and all tributaries, including their watersheds, draining into the Illinois River (see project map, Attachment 1). Study and restoration initiatives will likely focus on the rivers, streams, floodplains, and adjacent riparian corridors.

2.3 Ecosystem Goals

The principal habitat problems in the Illinois River Basin are the result of sedimentation of backwaters and side channels, degradation of tributary streams, water level fluctuations, loss of floodplain and tributary connectivity, and other adverse impacts caused by human activities. A restoration vision was developed for the Illinois River as part of the development of the State of Illinois Lt. Governor's *Integrated Management Plan for the Illinois River Watershed*. The Illinois River Strategy Team prepared this plan with input from nearly 150 participants. The vision of this plan was for:

> *A naturally diverse and productive Illinois River Basin that is sustainable by natural ecological processes and managed to provide for compatible social and economic activities.*

With the *Integrated Management Plan* providing context, the following list of ecosystem restoration goals was developed during the Illinois River Ecosystem Restoration Study:

1. Reduce sediment delivery from upland areas and tributaries to the Illinois River,
2. Selectively remove sediment, reduce sediment deposition, and improve sediment characteristics in backwaters and side channels,
3. Restore floodplain habitat and function,
4. Increase connectivity of aquatic and terrestrial habitats,
5. Naturalize hydrologic regimes in tributaries and the mainstem Illinois River,

6. Restore natural disturbance regimes,
7. Protect high quality and restore degraded native ecosystems and habitats,
8. Maintain viable populations of native species, and
9. Improve water quality.

These nine goals are consistent with and expand on the four primary focus areas originally identified by the ILDNR in the PMP for the Illinois River Ecosystem Restoration Feasibility Study:

1. Watershed Stabilization - Address tributary alterations and land uses, conservation easements, wetlands, water retention, riparian filter strips, and stream restoration.
2. Side Channel and Backwater Modification - Consider opportunities to restore habitats in these areas, including off-channel deep water habitat, backwater lakes, side channels, constructing islands, etc.
3. Water Level Management - Evaluate options to reduce rapid fluctuations and naturalize flows.
4. Floodplain Restoration and Protection - Evaluate floodplain use, potential restoration of floodplain function, and value/potential for acquisition or conservation easements of some floodplain lands.

2.4 Study Objectives

Several planning objectives of the Comprehensive Plan were identified in the Illinois River Ecosystem Restoration Study and will provide a framework for meeting the ecosystem goals. These were expanded to include Section 519 requirements and now include, but are not limited to, the following:

- Assess the overall restoration needs and develop a consensus-based desired future condition of the Illinois River Watershed.
- Develop a framework to monitor and address restoration of ecosystem function, structure, and dynamic processes to the nationally recognized Illinois River System. Help to restore a natural, functional, and self-regulating system and protect critical resources from further degradation.
- Develop Critical Restoration Projects in the context of broader system/ecosystem or watershed level goals, considering the interrelationships of plant and animal communities and their habitats in a larger ecosystem context (health, productivity, and biological diversity).
- Incorporate an adaptive management approach to restoration efforts considering the interconnectedness of water and land, the dynamic nature of the economy and environment, and need for flexibility in the formulation and evaluation process.
- Develop watershed or sub-watershed management plans identifying the combination of recommended actions to be undertaken by various potential stakeholders.

- Collaborate in partnership with other governmental agencies, organizations, and the private sector.
- Produce benefits consistent with regional and national natural resource management plans such as the North American Waterfowl Management Plan, Clean Water Action Plan, Mississippi River/Gulf of Mexico Watershed Nutrient Task Force, and Brownfields Cleanup and Redevelopment Initiative.
- Provide ancillary recreational benefits.
- Meet requirements established in Section 519 of the WRDA 2000.

Several planning objectives for the Critical Restoration Projects have been identified. These include, but are not limited to, the following.

- Implement projects which will produce independent, immediate, and sustainable restoration, preservation, and protection benefits.
- Investigate projects addressing the various system goals in detail to provide additional site-specific application and understanding to help refine system goals and objectives.
- Evaluate a range of alternatives in detail for common system problems. Document the analysis approach, alternatives/best management practices considered, habitat benefits and evaluation tools, etc. This information should then assist in streamlining future Critical Restoration Project evaluations for similar projects.
- Use the experience from these initial sites to select next projects and develop a framework for selection, evaluation, and implementation of Critical Restoration Projects throughout the Basin.

3.0 PROJECT PURPOSE

3.1 Critical Assumptions

The following assumptions provide the basis for the development of the Comprehensive Plan and Critical Restoration Projects:

- The without-project condition of the Illinois River Basin will include continued sedimentation of backwaters and side channels, degradation of tributary streams, water level fluctuations, loss of floodplain and tributary connectivity, and other adverse impacts caused by human activities.

- The Comprehensive Plan will be developed using information from the complementary Illinois River Ecosystem Restoration Feasibility Study and additional Illinois River Basin Restoration Section 519 efforts described in this document. Illinois River Ecosystem Restoration Study efforts will meet National Environmental Policy Act (NEPA), U.S. Fish and Wildlife Service (USFWS) coordination, programmatic cultural compliance, etc. for system investigations. A separate feasibility level report will be prepared for each Critical Restoration Project. These documents will provide the basis for individual project approvals and will address Federal and State environmental and cultural requirements.

- The Comprehensive Plan will develop recommendations consistent with the Restructured Upper Mississippi River-Illinois Waterway System Navigation Feasibility Study and the Upper Mississippi River Comprehensive Plan projects, but will not duplicate efforts and investigations regarding transportation and flood protection needs.

- The PMP was designed to cover tasks for FY02 and FY03 assuming full funding of expressed FY03 capability ($5 million Federal). However, if a lower level of funding is received, this PMP and identified tasks could be undertaken over additional years. It is assumed that this PMP will be updated in FY03 to cover FY04.

- Policy Exceptions and Streamlining Initiatives: The study will be conducted in accordance with the Principles and Guidelines and Corps of Engineers regulations. Exceptions to established guidance were not identified in the Initial Assessment, except a request for delegation of approval authority for Critical Restoration Projects to the Mississippi Valley Division.

3.2 Constraints

The following constraints were identified in the Initial Assessment. The potential exists for additional constraints to be identified as analyses are conducted to complete the Comprehensive Plan.

- No impacts on flood elevations as required by Illinois law - Illinois State law specifies that any action in the floodplain that increases flood heights is not allowable or must be accompanied by mitigation of adverse effects. Due to the potential high cost associated with these actions, efforts will be made to avoid this threshold.

- No significant adverse impact on navigation channel flows - The Corps of Engineers currently operates and maintains the 9-Foot Channel Navigation Project on the Illinois Waterway. The project should avoid changes that would result in the potential for increased sedimentation in the main channel or require increased main channel maintenance dredging.

- Sponsor limitations – These include funding, land ownership or ability to acquire, and desire for limited operation and maintenance. As the Non-Federal Sponsor, the ability of the State of Illinois to afford various features or acquire the lands, easements and rights-of-way represented potential limiting factors. At this time, a final legal determination has not been made as to ownership of submerged lands in the Illinois River Basin. In addition, the Sponsor desires more natural and sustainable alternatives, which avoid high operation and maintenance costs.

- Legal compliance – Due to the geographic size, scope, and purpose of this study, multiple levels of legal authority apply to the project area. All efforts conducted in the development of the Comprehensive Plan shall comply with all Federal, State, and local regulations pertaining to the activities undertaken by the Corps of Engineers and the non-Federal sponsor in this study.

4.0 TEAM, CUSTOMER, AND STAKEHOLDER IDENTIFICATION

4.1 Team Members

Table 1 lists the primary team members for the Corps of Engineers and Illinois Department of Natural Resources.

Table 1. Primary Team Members

Team Member	Role	Agency	Telephone	Email Address
Corps of Engineers				
Bradley Thompson	Regional Project Manager and Study Manager	Rock Island Corps	(309) 794-5256	Bradley.E.Thompson@usace.army.mil
Marshall Plumley	Assistant Study Manager	Rock Island Corps	(309) 794-5447	Marshall.B.Plumley@usace.army.mil
Jodi Staebell	Study Manager -Critical Restoration Projects	Rock Island Corps	(309) 794-5448	Jodi.K.Staebell@usace.army.mil
Tamara Atchley	Project Manager (St. Louis)	St. Louis Corps	(314) 331-8044	Tamara.L.Atchley@usace.army.mil
Tom Fogarty	Project Manager (Chicago)	Chicago Corps	(312) 353-6400 x3100	Thomas.J.Fogarty@usace.army.mil
Chuck Theiling	Biologist	Rock Island Corps	(309) 794-5636	Charles.H.Theiling@usace.army.mil
Kirk Sunderman	Overall Project Engineer	Rock Island Corps	(309) 794-5140	Kirk.J.Sunderman@usace.army.mil
Michael Schwar	Hydraulic Engineer	Rock Island Corps	(309) 794-5410	Michael.T.Schwar@usace.army.mil
Karen Grizzle	Real Estate	Rock Island Corps	(309) 794-5201	Karen.J.Grizzle@usace.army.mil
Mary Craig	GIS	Rock Island Corps	(309) 794-5816	Mary.R.Craig@usace.army.mil
Sharryn Jackson	Social Specialist	Rock Island Corps	(309) 794-5309	Sharryn.A.Jackson@usace.army.mil
Sue Simmons	Public Involvement	Rock Island Corps	(309) 794-5573	Suzanne.R.Simmons@usace.army.mil
Joe Dziuk	Project Engineer – Kankakee & Iroquois River	Rock Island Corps	(309) 794-5812	Joe.Dziuk@usace.army.mil
Andrew Barnes	Project Engineer – Waubonsie	Rock Island Corps	(309) 794-5402	Andrew.G.Barnes@usace.army.mil
Tom Heinold	Project Engineer – Pekin Lake	Rock Island Corps	(309) 794-5421	Thomas.D.Heinold@usace.army.mil
Dennis Stephens	Project Engineer – McKee	St. Louis Corps		Dennis.L.Stephens@usace.army.mil
Mike Tarpey	Project Engineer – Blackberry	Rock Island Corps	(309) 794-5179	Michael.J.Tarpey@usace.army.mil
State of Illinois Department of Natural Resources				
Jim Mick	Sponsor Point of Contact	Illinois DNR	(309) 543-3316	jmick@dnrmail.state.il.us
Doug Austen	Watershed Mgmt Section	Illinois DNR	(217) 785-5935	dausten@dnrmail.state.il.us
Mike Demissie	Illinois State Water Survey	Illinois DNR	(217) 333-4753	demissie@sws.uiuc.edu
Mark Pegg	Illinois Natural History Survey	Illinois DNR	(309) 543-6000	markpegg@staff.uiuc.edu
Bev Herzog	Illinois State Geological Survey	Illinois DNR	(217) 244-2788	herzog@isgs.uiuc.edu
John Marlin	Waste Management Research Center	Illinois DNR	(217) 333-8956	jmarlin@wmrc.uiuc.edu
Loren Wobig	Office of Water Resources	Illinois DNR	(217) 782-9130	lwobig@dnrmail.state.il.us
Bob Schanzle	Permit Review	Illinois DNR	(217) 785-4863	bschanzle@dnrmail.state.il.us
Mick Cochran	Middle Illinois Regional Team	Illinois DNR	(309) 543-3316	mcochran@dnrmail.state.il.us
Jim Langbein	Upper Illinois Regional Team	Illinois DNR	(630) 553-6680	jlangbein@dnrmail.state.il.us
Gary Lutterbie	Kankakee Regional Team	Illinois DNR	(217) 784-4730	glutterbie@dnrmail.state.il.us
Larry Cruse	Lower Illinois Regional Team	Illinois DNR	(618) 462-1181	lcruse@dnrmail.state.il.us

Note: Only the primary team members are listed. A large number of additional personnel will be involved to a lesser extent.

4.2 Roles and Responsibilities

Table 2 is the Responsibility Assignment Matrix, highlighting the lead and contributing organizations for each project task. The specific tasks are described in detail in Section 6.0.

Table 2. Responsibility Assignment Matrix

WBS Code	Activity	PM-M	PM-A	ED-C	ED-D	ED-H	ED-G	ED-S	MVS	LRC	CT	OD	RE	ILDNR IKS
1.1	***Comprehensive Plan - Required Tasks***													
1.1.1	Development of a Long Term Resource Monitoring Program and Computerized Inventory and Analysis System	**2**	**1**		**2**	**2**					**2**			**2**
1.1.2	Development and Implementation of Sediment Removal Technology, Characterization, Transport, and Beneficial Use				**1**						**2**	**2**		**2**
1.1.3	Summarize Illinois River Transportation & Economic Information	**2**	**1**		**2**									
1.1.4	Project Management	**1**			**2**				**2**	**2**				**2**
1.1.5	Formulation/Prioritization	**1**	**2**		**2**	**2**			**2**	**2**				**2**
1.1.6	Programmatic Recommendations	**1**	**2**		**2**	**2**			**2**	**2**				**2**
1.1.7	Public Involvement Plan	**2**	**1**						**2**	**2**	**2**			**2**
1.2	***Comprehensive Plan Tasks – Project Evaluation and Formulation Framework***													
1.2.1	Evaluate Habitat Function & Benefits	**2**	**1**								**2**			**2**
1.2.2	Watershed Planning and Assessment Tools	**2**	**1**		**2**	**2**					**2**			**2**
1.2.3	BMPs & Implementation Tools	**2**			**1**	**2**								**2**
1.3	***Comprehensive Plan - Additional and Future System Understanding Tasks***													
1.3.1	Digitize Historic Aerial Photography	**1**			**2**						**2**			
1.3.2	Conservation Mapping	**1**	**2**								**2**			**2**
1.3.3	Sedimentation Surveys and Sediment Characterization				**2**			**1**			**2**	**2**		
1.3.4	Short-Term Special Studies & Monitoring	**2**	**1**			**2**					**2**			
1.3.5	Digitize Historic Maps (Woermann)					**1**					**2**			
2.1	***Critical Restoration Projects***													
2.1.1	Waubonsie Creek	**1**	**2**	**2**	**2**	**2**	**2**	**2**		**2**	**2**		**2**	**2**
2.1.2	Pekin Lake	**1**	**2**	**2**	**2**	**2**	**2**	**2**			**2**		**2**	**2**
2.1.3	Iroquois River	**1**	**2**	**2**	**2**	**2**	**2**	**2**			**2**		**2**	**2**
2.1.4	McKee Creek	**2**							**1**					**2**
2.1.5	Blackberry Creek	**1**	**2**	**2**	**2**	**2**	**2**	**2**		**2**	**2**		**2**	**2**
2.1.6	Kankakee River - Mainstem	**1**	**2**	**2**	**2**	**2**	**2**	**2**			**2**		**2**	**2**
2.2	***Future Critical Restoration Project Needs***													
2.2.1	New Project Fact Sheets and Assessment	**1**	**2**		**2**	**2**			**2**	**2**				**2**
2.2.2	New Project Feasibility	**1**	**2**		**2**	**2**	**2**	**2**			**2**		**2**	**2**
3.1	***Immediate Monitoring Needs***													
3.1.1	Systematic Hydrologic Gaging					**1**					**2**			
3.1.2	Critical Biological Monitoring		**1**								**2**			

Note: 1 = Lead organization
2 = Contributing organization

4.3 Customers

The principal customers for the Illinois River Basin Restoration Project are the State of Illinois and the Illinois Department of Natural Resources. In addition, the range of other customers includes the citizens of the State of Illinois and the United States.

Some of the key customer requirements and concerns were listed in the paragraph 3.2, Constraints. These include limitations in funding, land ownership or the ability to acquire, and desire for limited operation and maintenance. As the Non-Federal Sponsor, the ability of the State to afford various features or acquire the lands, easements and rights-of-way represented potential limiting factors. In addition, the Sponsor desires more natural and sustainable alternatives which avoid high operation and maintenance costs.

4.4 Stakeholders

Given the size of the study area and focus on watershed planning, there is a very large number of stakeholders. Stakeholders include elected officials, State and Federal agencies, local groups, and organizations. The primary Federal agencies include the United States Fish and Wildlife Service (USFWS), the United States Environmental Protection Agency (USEPA), the United States Geological Survey (USGS), the United States Department of Agriculture - Natural Resources Conservation Service (NRCS), and the Farm Service Administration (FSA). Primary State agency stakeholders include the Illinois Department of Agriculture (IDA) and Illinois Environmental Protection Agency (IEPA). In addition to these agencies, a large number of local agencies and organizations including soil and water conservation districts, counties, cities, regional planning organizations, local watershed groups and non-governmental organizations, are interested in the outcome of these efforts.

5.0 SCOPE OF WORK

This section summarizes the key study products and major study investigations, and outlines the communication plan for this project.

5.1 Key Products

The key products in this PMP include a Comprehensive Plan for Illinois River Basin Restoration, Critical Restoration Project reports and plans and specifications, and a report expressing immediate monitoring needs. In general, Comprehensive Plan efforts will result in the completion of two documents described below. These documents will be developed based on the combined information provided by the Illinois River Ecosystem Restoration Study and Illinois River Basin Restoration efforts.

- A Report to Congress will be prepared and submitted to Corps of Engineers' Headquarters for processing to Congress in July/August 2002. The document will meet Congressional Requirements in Section 519 for a report within 2 years of enactment with available data from both study efforts. This document will highlight the significance of the Illinois River, Goals and Objectives, Restoration Needs (general level), status and schedule to complete Comprehensive Plan, immediate actions and long-term needs including Critical Restoration Projects and monitoring, and recommendations.

- The Comprehensive Plan for the Illinois River will be completed by the fall of 2003. It will draw on information from both the ongoing Illinois River Ecosystem Restoration Study and additional efforts undertaken through Illinois River Basin Restoration (Section 519). This document will provide the overall Comprehensive Plan for the Illinois River Basin, including system needs and recommendations addressing the need for and direction of a continued restoration program, long-term resource monitoring, computerized inventory and analysis system, and findings from the other study investigations.

In addition to the two Comprehensive Plan products described above, other reports to be developed under this authority include:

- A separate feasibility level report and plans and specification documentation will be completed for each of existing six Critical Restoration Projects and new projects identified.

- A report summarizing any critical monitoring that should be initiated concurrent with the Comprehensive Plan will be developed by the fall of 2002. The complete proposal for a long-term monitoring program will be developed by the fall of 2003 and included in the Comprehensive Plan.

- Other summary reports will be completed to document any efforts finalized after the drafting of the fall 2003 Comprehensive Plan document.

5.2 Major Study Investigations

The following descriptions detail the major study investigations being conducted under the Illinois River Ecosystem Restoration Study and Illinois River Basin Restoration (Section 519) efforts, respectively.

Comprehensive Plan

Illinois River Ecosystem Restoration Study Major Investigations:

While covered under a separate PMP, the following descriptions were provided as a basis to understand the complementary work described in this PMP.

- Develop Goals and Objectives - System level goals have been developed under the Ecosystem Study and are presented under the Ecosystem Goals section of this assessment. Objectives will be further defined through ongoing study efforts.

- System Restoration Needs Assessment (RNA) - The RNA aspect of the study was designed to evaluate existing data availability; compile existing data in a Geographic Information Systems (GIS) application; describe physiographic characteristics of the Basin; evaluate stream channel dynamics; evaluate rapid watershed assessment techniques; evaluate existing, predicted, and desired future conditions; and compile a list of information needs. The RNA will provide information that significantly contributes to the development of the Illinois River Basin Restoration Comprehensive Plan and monitoring program and aides in the selection of future Critical Restoration Projects.

- Hydrologic Investigations - Several investigations are ongoing, including:

    - *Water Level Management Analysis:* In order to address the concerns with rapid water level fluctuations, an evaluation is being conducted to investigate potential refinements in management related to operations of Corps of Engineers dams, the Greater Chicago Metropolitan Water Reclamation District (MWRD), Lake Michigan Diversions, and tributary streams. This analysis is focused on identifying opportunities to more closely replicate the natural hydrologic regime. In addition, opportunities for pool drawdowns will be explored for two pools.

    - *Floodplain Restoration and Protection Analysis:* To address potential floodplain restoration, an evaluation will be conducted of floodplain management options, including increased management, removal, setback, or potential acquisition of some leveed areas.

    - *Basin Model:* A calibrated and verified hydrologic model of the watershed is being developed. The model should be able to estimate the consequences on water levels of actions taken within the watershed. The model will consist of two levels—a coarse grid model for the entire watershed and a fine grid model for some specific and selected watershed(s).

- System National Environmental Policy Act (NEPA) and Coordination - NEPA documentation and required environmental and cultural coordination will occur in a Programmatic EIS as part of the Ecosystem Study efforts.

- Site-Specific Projects - Several site-specific investigations were initiated under the Ecosystem Study. These projects are consistent with requirements for Critical Restoration Projects and are proposed to be the first Critical Restoration Projects implemented under Section 519.

Illinois River Basin Restoration Study Major Investigations:

- Development and implementation of a program for sediment removal technology, sediment characterization, sediment transport, and beneficial uses of sediment - This task will focus on review, evaluation, and determination of applicability for existing sediment removal technology, sediment characterization, sediment transport, and beneficial use of sediment within the Illinois River Basin. Field demonstrations of innovative sediment removal methods and technologies will be pursued where appropriate. The product of this task will be a concise summary of the various sediment removal, transport, and beneficial use options, their advantages and disadvantages, approximate costs, and appropriate application recommendations for the Basin.

- Development and implementation of a program for the planning, conservation, evaluation, and construction of measures for fish and wildlife habitat conservation and rehabilitation, and stabilization and enhancement of land and water resources in the basin - The development of this program will be the major outcome of the plan formulation efforts of both of these study efforts. Based on system level understanding gained through the various information gathering and analysis tasks, a program will be

developed. The process detailed later in this section will be used and further developed in the Comprehensive Plan to identify, evaluate, prioritize, and implement Critical Restoration Projects and any other future system restoration work.

- Development and implementation of a long-term resource monitoring program - A panel of regional experts on the Illinois River Basin will convene to determine the ecosystem functions that drive the system and then assess the physical and ecological parameters that best reflect each of these functions. These parameters will provide the basis for analyzing the state of the system as a whole and as such define the monitoring needs. The panel will also make recommendations regarding system biological and physical monitoring as well as site-specific pre- and post-project monitoring. A program for long-term resource monitoring of the Basin will be documented, along with recommendations for implementation. The activities recommended to be part of the program will help to better understand the system, identify changes, and provide a measure by which the cumulative effects of Critical Restoration Project implementation can be assessed.

- Development and implementation of a computerized inventory and analysis system - An assessment will be conducted of various criteria, mediums, platform, and methods necessary for the computerized inventory, analysis, and dissemination to interested parties of information collected during the study and future monitoring activities.

- Summarization of Illinois River transportation and economic information - This task will summarize navigation structures and use, operation and maintenance activities (dredging, etc.), flood damage reduction efforts, census, and recreational use data to meet the requirements of the Section 519 legislation. These efforts are currently being addressed through two separate ongoing study efforts. The Upper Mississippi River-Illinois Waterway System Navigation Feasibility Study, initiated in 1992, was established to consider navigation system improvements. The study was restructured in 2001 to emphasize environmental sustainability and will investigate opportunities to avoid and minimize environmental impacts of the navigation system. In addition, the Upper Mississippi River Comprehensive Plan project was initiated in FY 2002. This project will result in the development of a systemic, comprehensive flood damage reduction and flood protection plan for the Upper Mississippi and Illinois River floodplains. This task will facilitate information sharing and coordination of these efforts with the Illinois River Basin Restoration effort, looking for areas of joint benefit and interest.

- Improvement in planning tools for watershed assessments, characterizing ecosystem project benefits restoration techniques - In order to adequately assess the conditions of the Illinois River Basin, a number of tasks must be undertaken to improve the understanding of the condition of the system and the analysis techniques available. The tasks in this section focus on improving the tools available to analyze the Basin and Critical Restoration Projects. The results of these tasks will help streamline the process of identifying problems, solutions, and their benefits.

Critical Restoration Projects

Restoration of the Illinois River Basin requires the identification and implementation of projects within the watershed and along the course of the river that repair past and ongoing ecological damage so that a more highly functioning, self-sustaining ecosystem can develop within the existing basin context. Critical Restoration Projects will produce immediate habitat and sediment reduction benefits; will help evaluate the effectiveness of various restoration methods before application system wide; and make best use of the strong current local and State interest in ecosystem restoration within the Basin. The Corps of Engineers will implement these Critical Restoration Projects in collaboration with the non-Federal sponsor and other Federal and local agencies.

The six site-specific investigations underway as part of the Illinois River Ecosystem Restoration Feasibility Study are to be completed under this authority. These projects are consistent with the requirements outlined in Section 519 and are supported by the local sponsor. Additional Critical Restoration Projects will be identified, evaluated, and prioritized based on the procedures and responsibilities identified in the Illinois River Basin Restoration Initial Assessment.

Critical Restoration Project Selection Tasks:

- Project Identification Process - Interested parties will complete a 1-page information sheet and submit it to the Regional Team, or electronically submit the information through the Rock Island District web page. Periodically, as potential projects are identified, they will be submitted to the appropriate Regional Team and the Technical Team for evaluation.
- Project Evaluation Process - Projects will be evaluated at the regional team level to determine if they meet the basic minimum criteria for Critical Restoration Projects. Projects that meet the minimum criteria will be further evaluated and prioritized by the Regional Teams. The Regional Teams and Steering Committee will score projects based on the Corps planning criteria using an evaluation and prioritization matrix. The Illinois River Technical Team will also provide input on system needs and project types to the Regional Teams.
- Project Prioritization - The Steering Committee will prioritize the projects based on the evaluations of the Regional Teams. Projects may be grouped and prioritized by major tributary watershed, sub-watershed, restoration practice, or other methods. The Illinois River Technical Team will provide input on system needs and project types. The prioritized list will be submitted to the Executive Committee.
- Project Selection - The Executive Committee will select Critical Restoration Projects to recommend for final approval and implementation.
- Project Evaluation - Each Critical Restoration Project will be evaluated through a separate decision document (similar to EMP Definite Project Reports). The evaluations will define benefits such as habitat units created, stream miles of connectivity, tons of sediment reduced, and other benefits. Cost Effective and Incremental Cost analysis will be used to evaluate the benefits and costs of various project alternatives and to identify a recommended plan. The feasibility and implementation phases will be cost

shared 65/35 with the sponsor. Project Cooperation Agreements (PCAs) will be modeled after those of the EMP and Environmental Continuing Authorities Program.

Other Critical Restoration Tasks:

- Model PCA Document - A model PCA will be developed for the program with the initial projects and following Headquarters' approval will allow delegation of PCA approval.

The six Critical Restoration Projects identified through the Illinois River Ecosystem Restoration Study should be the first Critical Restoration Projects implemented under Section 519. These efforts meet the proposed criteria, were identified by the ILDNR through a basin-wide evaluation process, represent a range of project types addressing the major system problems, and have local interest and support.

Current Critical Restoration Projects:

- Waubonsie Creek - Waubonsie Creek is located in northeastern Illinois. The creek has a number of low-head dams that prevent movement of fish from the Fox River into potential spawning and nursery habitat in Waubonsie Creek. Restoration alternatives include dam removal or modifications to provide fish passage and restoration of instream and riparian habitats.

- Pekin Lake - Pekin Lake is a backwater lake complex located adjacent to the Illinois River at river miles 153-156 of the Illinois Waterway. Sedimentation has reduced the depth of the backwater lake complex and has degraded the natural aquatic resources. Restoration alternatives include dredging to maintain and improve aquatic habitats and managing water levels to ensure the presence of moist soil plants for use by waterfowl.

- Iroquois River - The Iroquois River is located in eastern Illinois and western Indiana. Modifications of tributaries through ditching and straightening have increased velocities, bed and bank erosion, and the sediment load delivered to the Iroquois River and eventually the Illinois River. Restoration efforts will focus on streambed and bank stabilization and riparian corridor restoration.

- McKee Creek - McKee Creek is located in west-central Illinois. This tributary stream displays severe streambank and streambed erosion and is contributing sediment directly to the Lower Illinois River. Restoration efforts will focus on stabilizing a head cut at the lower portion of McKee Creek to keep stream downcutting, widening, and bank collapse from progressing upstream through the watershed.

- Blackberry Creek - Blackberry Creek is located in northeastern Illinois. Currently, the stream has high quality habitats, but a 10-foot dam near the confluence with the Fox River severely limits fish and macroinvertebrate access to this habitat. Restoration alternatives include removal of the dam or construction of a fish passage structure.

- Kankakee River - Mainstem - The Kankakee River is located in northeastern Illinois and northwestern Indiana. The Kankakee River carries an excessive sediment load, and habitat quality of the Kankakee River is expected to decline due to sedimentation. Side channel and pool areas in this reach are expected to continue to lose depth and habitat diversity as cobble and gravel substrates become covered by sand. Restoration alternatives include removing excess sediment to prevent further degradation of aquatic habitats and restoring riffle, pool, and side channel habitats.

Long Term Resource Monitoring

Some ongoing system monitoring is necessary to regularly assess the state and restoration needs of the system as the project continues. Some ecosystem components, such as water quality, already have monitoring programs and databases to evaluate conditions over time and space. Many other ecosystem components, such as wildlife, have smaller, targeted monitoring programs to evaluate conditions in small areas. Many ecosystem components or functions are not monitored at all. Parameters selected for monitoring need to measure the relevant aspects of the ecosystem components identified in the basin-wide goals above. Specifically, additional information is needed on sediment transport, watershed connectivity, and basin hydrology. The results of this monitoring will feed back into the prioritization process at all levels to aid in the identification of future Critical Restoration Projects. Data collected under this effort will extend information beyond that collected for the mainstem of the river under the EMP Long Term Resource Monitoring program to the entire watershed.

Significant databases and monitoring exists for the Illinois River basin for a wide variety of physical and biological characteristics and by numerous agencies. For the Illinois Conservation Reserve Enhancement Program (CREP), many of these datasets have been catalogued (see the 2001 Annual Report for the Illinois CREP, ILDNR). Some examples include:

- Long Term Resource Monitoring Program (INHS and USGS)
- Ambient Water Quality Monitoring Program (IEPA)
- Long-Term Illinois River Electrofishing Data (INHS)
- Critical Trends Assessment Program (INHS)
- National Water Quality Assessment Program (USGS)
- Stream fisheries basin survey, aerial waterfowl counts, and Ecowatch (ILDNR)
- T-by-2000 soil erosion transect surveys (IDA)

Further monitoring exists as components of several watershed assessment projects. These include the paired watershed approach used in the Illinois Interagency Pilot Watershed Program in Court Creek (Knox County) and the Jim Edgar/Panther Creek State Fish and Wildlife Area (Cass County). Intensive monitoring is also done in the watershed of Lake Decatur and in the Big Ditch area of the Upper Sangamon River Basin by the Illinois State Water Survey.

Although the types of data and locations collected are superficially extensive, much of the data are collected for purposes that may not support the monitoring necessary for the assessment of the Illinois River Ecosystem Restoration Program. Data collection locations may be spatially distant from restoration sites, sensitivity of the indices or measures may be

insufficient to detect change, or there may be insufficient repetition or system variance to obtain adequate statistical power.

The most comprehensive databases currently available are for waterfowl in mainstem wildlife management areas, mainstem Illinois River fishes, aquatic invertebrates, and water quality in some, but certainly not most, streams and lakes. Sediment and stream gaging station networks were recently scaled back, with the result of relatively few sediment and discharge estimates for large portions of the watershed. Except for routine volunteer surveys such as the Christmas bird count and the breeding bird survey, most bird species are not monitored. Land cover throughout the watershed has been characterized by remote sensing (LANDSAT) imagery, but forest, wetland, and grassland species composition data are difficult to find. Potential resource monitoring measures and their value to address these deficiencies could include, but are not limited to:

Monitoring Measures	Explanation/Value to Ecosystem Understanding
Data collection for ecosystem indicators or biological assessment criteria	Monitors selected ecosystem criteria to evaluate the state of the system over time.
Tributary and mainstem sediment gage network	Quantifies sediment movement through the tributaries, delivery to the mainstem, and movement of sediment within the mainstem.
Stream flow gaging of smaller tributaries	Characterizes nature and change in hydrologic regimes of basin headwaters.
Reevaluation of changing land use patterns	Periodic update to quantify large-scale landscape changes and evaluate potential changes in ecosystem functions.
Pre-project and post-project site specific restoration monitoring	Monitor and collect key information to assist in planning, design, and evaluation of restoration project success.

Any monitoring initiative will be coordinated with other existing and proposed local, State, and Federal monitoring efforts to maximize the amount of valid data acquired.

System monitoring will follow a process of identification, evaluation, and prioritization similar to the one used for Critical Restoration Projects. Resource monitoring needs will be identified by a Monitoring Needs Study Team. The Steering Committee will prioritize, sequence, and recommend monitoring programs based on input from the Regional and Technical Teams. Monitoring will meet the goals and objectives and address areas likely to influence the need for and evaluate the success of restoration projects. Monitoring needs will be forwarded to the Executive Committee for approval. Recommended monitoring plans will be funded and monitoring will proceed in the most cost-effective way. Immediate system monitoring needs include the collection of additional sediment, stream flow, and biological data. Once the Monitoring Needs Study Team is initiated, they will develop detailed recommendations for any critical monitoring that should be initiated concurrent with the Comprehensive Plan.

5.3 Communications Plan

The communications plan for this study includes the use of a number of standing committees to facilitate interagency and public information sharing and dialog as well as development and maintenance of "Web" Intra- and Internets, to help ensure that communication is clear, timely, and effective. In addition, the project will include a public involvement program including the writing of newsletters and holding of public workshops. List servers have been developed for meeting notification and meeting summaries, and interim products are being posted on the project web site: http://www.mvr.usace.army.mil/ILRiverEco/default.htm.

Committees include:

Executive Committee: The Committee will have representatives from both Corps of Engineers Divisions (Mississippi Valley Division and Lakes and Rivers Division) and the non-Federal sponsor. The Executive Committee will be responsible for oversight of the study, overall policy direction, and implementation.

Steering Committee: The Steering Committee is the core interagency group responsible for conducting the Illinois River Ecosystem Restoration Feasibility Study and Illinois River Basin Restoration efforts. It will be co-chaired by the Corps of Engineers and the non-Federal sponsor, and will be composed of State and Federal agency representatives. This Committee will meet approximately every quarter to coordinate State and Federal action to ensure synergy between various agency programs. The Steering Committee will be supported by the activities and information of the Working Group and the Illinois River Technical Team.

Working Group: The Working Group will provide study status and information on interim products to all interested local, State, and Federal agencies, as well as non-governmental organizations and the public. The Working Group will meet quarterly or as interim products are completed. Its primary focus will be public involvement, information sharing, and dialog among all groups and interests.

Illinois River Technical Team: The Technical Team will develop the detailed methodology necessary to conduct a comprehensive, basin-wide assessment of historic ecological change, existing conditions, predicted future conditions, and desired future conditions. Team members will be selected from four ILDNR regions, several State and Federal agencies, and academic institutions. The Technical Team will incorporate the expertise of science advisors as necessary.

Regional Teams: Regional Teams will provide a mechanism for local resource managers—with detailed information on resource concerns—to identify and evaluate site-specific investigations that are currently underway.

6.0 DETAILED SCOPE OF STUDIES AND WORK BREAKDOWN STRUCTURE

The anticipated product will be a Comprehensive Plan for the Illinois River Basin, including a long-term resource monitoring plan. Critical Restoration Projects will be identified, evaluated, and selected for implementation. The Comprehensive Plan document will provide information on all components identified in Section 519 not previously addressed by ongoing studies. NEPA documentation and environmental and cultural coordination at the system level will be accomplished through completion of the Illinois River Ecosystem Restoration Study. The Critical Restoration Projects will provide all necessary documentation to permit project approval by Headquarters and Mississippi Valley Division for feasibility level study as outlined in the Illinois River Basin Restoration Initial Assessment. Resource monitoring of critical items will be initiated upon approval to provide critical information necessary to begin formulation of the comprehensive and long-term resource monitoring plans.

A. Review of Products to be Produced

This PMP covers the development of Section 519 products (e.g., Comprehensive Plan – overall report and components, Critical Restoration Project – DPRs and P&S, and immediate monitoring needs, and other supporting plans).

1. **Comprehensive Plan (Product 1).** This product includes all activities leading to the approval of the Comprehensive Plan and recommended Critical Restoration Projects by Headquarters, U.S. Army Corps of Engineers. It will describe all of the problems identification and formulations activities required for the development of Comprehensive Plan components identified under Section 519 and Critical Restoration Projects to be implemented. An interim report will be transmitted to Congress in the summer of 2002, and the study will culminate with a Final Report in December 2003. Other summary reports will be completed to document any efforts finalized after the drafting of the Fall 2003 Comprehensive Plan document.

2. **Critical Restoration Projects (Product 2).** This product includes all activities leading to the approval of the Critical Restoration Projects by Corps Headquarters. These tasks will include development of PCAs of feasible plans for the Critical Restoration Projects.

As part of the feasibility effort, a draft Project Management Plan (PMP) will be prepared based on the recommended project(s) and a baseline cost estimate will be developed. The draft PMP will address the schedule of Preconstruction Engineering and Design (PED) activities. These activities include design memorandums and preparation of plans and specifications for the initial construction contracts. The draft PMP will address the development of additional products and more detailed plans for successful management and completion of the project. These documents will form the basis for the PMP to be finalized for project construction. The draft PMP will be submitted with the draft study report.

As the study progresses, supporting plans will be developed, as needed, to address specific items such as local cooperation, real estate acquisition, quality control, value engineering, environmental and cultural matters, safety and security, and project operation and maintenance. Reporting requirements in ER 5-1-11, *Program and Project Management*, will be followed.

3. **Immediate Monitoring Needs (Product 3).** Following submittal of a monitoring report describing immediate needs and Headquarters approval, monitoring may be initiated in come critical areas.

B. Description of Tasks Required to Produce Products

The purpose of this section of the PMP is to describe the products, sub-products, major tasks/work elements, and tasks/activities required to produce a feasibility level document. Tasks are organized by major product, but reference is made to the U.S. Army Corps of Engineers Civil Works Breakdown Structure (WBS) on the summary table (Table 3 on page 29), which shows the estimated breakdown of work by organization/discipline. The funding shown for each individual task includes 15% contingency. In total, this PMP covers $8,117,000 of effort. Given the 65/35 cost sharing requirements, the Federal share is $5,276,000 and the State share is $2,841,000 (composed of $715,000 of in-kind services and $2,126,000 in cash).

1.1 Comprehensive Plan Tasks – Required Elements. Illinois River Basin Restoration (WRDA 2000 Sec. 519) contains provisions for the development of a long-term resource monitoring program; sediment removal technology, characterization, transport, and beneficial use options; new technologies and approaches to enhance the Illinois River as a transportation corridor; and increased economic opportunity for agriculture and business communities. The Initial Assessment identified several ongoing efforts that would provide information related to these Comprehensive Plan items. The tasks outlined below are required to complete those Comprehensive Plan items not already fulfilled by other ongoing efforts.

Developing a Comprehensive Plan for the management of Illinois Basin resources is a high priority at the early stage of the restoration program, so initial efforts will concentrate on Comprehensive Plan development. The comprehensive planning efforts will reduce after the Initial Assessment is completed, but the plan will require periodic reviews, as outlined in the tasks shown under the heading "Additional and Future System Understanding Tasks." The Comprehensive Plan will establish goals and objectives to restore the Illinois River Basin. The effort will require the participation of a wide range of stakeholders including: State and Federal agencies, municipalities, farmers, hunters and fishers, environmentalists, and the general public. *The total cost is estimated at $1,485,000, including estimated in-kind services of $345,000.*

1.1.1 Development of a Long-Term Resource Monitoring Program and Computerized Inventory and Analysis System. This task is to develop the framework for a long-term resource monitoring and computerized inventory and analysis program in the Illinois River Basin. Illinois River Basin Restoration (WRDA 2000, Sec. 519) calls for scientific assessments to monitor selected environmental parameters, to answer ecological questions, and to evaluate the ecological response to restoration measures. Some of the incompleteness of the current state of knowledge and the data availability for many Illinois River Basin ecosystem components has arisen because several different agencies and individuals have been responsible for data collection and management, and the data has not been fully integrated to date. The Illinois River Ecosystem Restoration Feasibility Study will attempt to identify the current state of the Illinois River Basin ecosystem as well as available databases that could be supported. It will also identify where new data collection should be initiated. An approach to storing the data in a readily accessible format and location will be identified. The Illinois River Decision Support System (ILRDSS), under development by the Illinois Scientific Surveys, is one potential tool for the integration of data and information.

A panel of regional experts with experience in the Illinois River Basin will convene to determine the ecosystem functions that drive the system and then assess the physical and ecological parameters that best reflect each of these functions. These parameters will provide the basis for analyzing the state of the system as a whole and as such define the monitoring needs. Factors such as the rate of change of these parameters and their scale of influence in relation to the total basin area will be considered to determine the amount and types of monitoring activities necessary to track the state of the system over time, assess the progress of restoration projects, and provide feedback into areas requiring further restoration work. The panel will also make recommendations regarding system biological and physical monitoring as well as site-specific pre- and post-project monitoring.

The process of developing the monitoring plan will be documented and presented to the steering committee, regional team, and work groups. The process may also be presented to the natural resources management community and interested stakeholders at professional society meetings such as the Governor's Conference on the Illinois River and in peer reviewed published proceedings. An independent technical review by state, regional, national and international experts who have worked on similar river basins in the field of ecosystem assessment and restoration may also be convened to review the monitoring plan. *Estimated at 679 person days at $380,000, including estimated in-kind services of $50,000. Contracting of significant portions of this task is planned.*

1.1.2 Development and Implementation of Sediment Removal Technology, Characterization, Transport, and Beneficial Use. This task will focus on review, evaluation, and determination of applicability for existing sediment removal technology, sediment characterization, sediment transport, and beneficial use of sediment within the Illinois River Basin. Field demonstrations of innovative sediment removal methods and technologies will be pursued where appropriate. The product of this task will be a concise report summarizing the various sediment removal, transport, and beneficial use options, their advantages and disadvantages, and approximate costs. Included in this estimate is the evaluation of innovative sediment removal and beneficial use of materials tests conducted by the ILDNR from April 2001 to March 2002. These charges are allowable under Section 519 and are estimated at $47,815. *Estimated at 554 person days at $310,000, including estimated in- kind services of $65,000 (including the $47,815 conducted prior to the signing of this agreement). Contracting of significant portions of this task is planned.*

1.1.3 Summarize Illinois River Transportation and Economic Information. This task will summarize navigation structures and use, operation and maintenance of the Illinois Waterway (dredging, etc.), flood damage reduction efforts, census, and recreational use data to meet the requirements of the Section 519 legislation. Some of these efforts are being addressed through two separate ongoing study efforts. The Upper Mississippi River-Illinois Waterway System Navigation Feasibility Study, initiated in 1992, was established to consider navigation system improvements in light of increasing congestion at locks and anticipated future increases in commercial navigation traffic. The study considers all the locks along the Illinois Waterway. The study was restructured in 2001 to emphasize environmental sustainability, and the restructured study will investigate opportunities to avoid and minimize environmental impacts of the navigation system by considering ways to coordinate ecosystem needs with navigation system operation and maintenance activities. In addition, the Upper Mississippi River Comprehensive Plan project was initiated in FY 2002. This project will result in the development of a systemic, comprehensive flood damage reduction and flood protection plan for the Upper Mississippi and Illinois River floodplains. This task will facilitate information sharing and coordination of these efforts with the Illinois

River Basin Restoration study and look for areas of joint benefit and interest. *Estimated at 45 person days at $25,000.*

1.1.4 Project Management. The project manager will oversee efforts and monitor funds, and work progress to ensure tasks are completed on time and within budget. The project manager will ensure that all data collection activities are proceeding as scheduled and that the information collected is properly disseminated. Project management activities include frequent coordination with technical elements, response to congressional or other study related inquiries, annual preparation of the budget, and maintaining open dialogue with the non-Federal sponsor, Mississippi Valley Division, Lakes and Rivers Division, Rock Island District, St. Louis District, and Chicago District. This task will be led by the Rock Island District's Planning, Programs, and Project Management Division with assistance from St. Louis and Chicago Districts (or appropriate contractors) and the non-Federal sponsor. *Estimated at 535 person days at $300,000 (375 person days for Federal = $210,000 and 140 person days for non-Federal in-kind services = $80,000)*.

1.1.5 Formulation/Prioritization. Refinement and coordination of the process of identifying, evaluating, and selecting Critical Restoration Projects and monitoring will be the main goal of this task. Funding would support costs associated with Project Management and Plan Formulation including ILDNR and Corps staffing associated with Regional Team, Steering Committee, and Executive Committee Meeting and activities. Tasks would also include the documentation of formulation and prioritization activities, etc. *Estimated at 521 person days at $300,000 (357 person days Federal = $200,000 and 156 person days non-Federal in-kind services =$100,000)*.

1.1.6 Programmatic Recommendations. This task would include the coordination and development of the details of future program activities under Section 519 of WRDA 2000. Anticipated recommendations would include addressing future annual funding levels, annual work plans, transition of program to Construction General (CG) funding, steps in Critical Restoration Project development (pre-project monitoring, fact sheet, PMPs, feasibility, reviews and approval, model PCA development, etc.), allowances for past work-in-kind and land credits. *Estimated at 174 person days at $100,000 (125 person days Federal = $70,000 and 47 person days non-Federal in-kind services = 30,000)*.

1.1.7 Public Involvement Plan. Public involvement is the exchange of information to and from various segments of the public. The purpose "is to ensure that U.S. Army Corps of Engineers programs are responsive to the needs and concerns of the public" (ER 1105-2-100, Appendix L – Public Involvement). The goals of a public involvement plan are to inform and educate the public and solicit feedback through open communication; and include in the plan formulation process all publics interested in and affected by the study recommendation(s).

This task will include a public involvement program designed to meet the NEPA requirements and the requirements of ER 1105-2-100; inform the public and government agencies about the condition of the Illinois River Basin and its problems; obtain public input to the Comprehensive Plan and Critical Restoration Projects; ensure that the public and agency concerns are addressed; and keep the public and agencies apprised of the study goals, progress, and proposed Comprehensive Plan and Critical Restoration Projects. The results of the public involvement program will be documented in a Public and Agency Coordination Report as part of the Report to Congress and the Comprehensive Plan. The report will include notices of meetings, meeting summaries, copies of pertinent letters, and other items

appropriate to public involvement. *Estimated at 125 person days at $70,000, including estimated in-kind services of $10,000.*

1.2 Comprehensive Plan Tasks – Project Evaluation and Formulation Framework. In order to adequately assess the conditions of the Illinois River Basin, a number of tasks must be undertaken to improve our understanding of the condition of the system and the analysis techniques available. The tasks in this section focus on improving the tools available to analyze the Basin and Critical Restoration Projects. The results of these tasks will help streamline the process to identify problems, solutions, and their benefits. This information is critical to the development of a Comprehensive Plan and selection and evaluation Critical Restoration Projects. *Estimated at $485,000, including estimated in-kind services of $90,000.*

1.2.1 Evaluate Habitat Function & Benefits. This task will develop a report evaluating key habitat types, common modeling tools, and potential benefits in the Illinois River Basin. Habitat types include, but are not limited to, the following: wetlands, backwaters, riparian, floodplains, and stream corridors. Benefits determinations for each habitat type (ecosystem function, species benefits, water quality, sediment quantity, hydrology and hydraulics) will assist in assessing and selecting appropriate Critical Restoration Projects in the future. This report will also evaluate common modeling tools available to best represent restoration benefits. The initial report product will be completed in FY 03 and will consist of complete evaluations of two habitat types. Further habitats will be evaluated in subsequent years. *Estimated at 357 person days at $200,000, including estimated in-kind services of $30,000. Contracting of portions of this task is planned.*

1.2.2 Watershed Planning and Assessment Tools. This task will evaluate existing watershed planning techniques, methods, and tools to develop recommendations to improve the evaluation of watersheds in the Illinois River Basin. This task will also selectively demonstrate and implement promising innovative technologies and tools. *Estimated at 357 person days at $200,000. Estimated in-kind services are $35,000. Contracting of portions of this task is planned.*

1.2.3 Best Management Practices (BMPs) and Implementation Tools. This task will develop a listing of restoration BMPs for application within the Illinois River Basin. Existing practices of the NRCS, ILDNR, USGS, Illinois Department of Agriculture (IDA) and other sources will be identified and modified as necessary to fit the restoration needs of the Illinois River Basin. Specific design, costs, construction, and environmental characteristics will be documented for selected BMPs likely to be widely used within the basin. The initial level of effort will support a review of existing practices and complete documentation of two specific practices. *Estimated at 152 person days at $85,000, including estimated in-kind services of $15,000.*

1.3 Comprehensive Plan - Additional and Future System Understanding Tasks. Developing the Comprehensive Plan tasks will be a major focus of the first 2 years, but end by FY04. If still funded at that time, the following group of tasks will be established to carry out additional efforts related to improving system understanding over a long period of time if efforts continue to be funded. The purpose of these system understanding tasks is to enhance the knowledge base for defining system restoration needs, selecting restoration projects, efficiently implementing restoration projects, and assessing the effectiveness of restoration measures in the basin. *Estimated at $650,000, including estimated in-kind services of $10,000.*

1.3.1 Digitize Historic Aerial Photography. The objective of this task is to obtain scanned images of historical, aerial photographs of the Illinois River Basin and to make those images available for geomorphological analyses (e.g., movement of nick points, changes in stream alignments) of physical and cultural landscapes within the Basin. The products will provide additional information that may be used for estimating baseline conditions and evaluating changes through time. In order to accomplish this objective, methods and procedures will be developed and used to compile a digital archive of aerial photographs acquired during the late 1930's to early 1940's as part of the USDA Agricultural Adjustment Administration program. These photographs represent the earliest and only remaining detailed, historical, aerial photographic record of Illinois' physical and cultural landscapes. The photographs are stored in several university library archives within Illinois, but because of their unique historic value, the photographs are not accessible to the public, planners, and researchers. For the initial 2 years of effort, the following will be accomplished: (1) a web interface will be built to serve scanned images of aerial photographs and (2) photographs of Kankakee, Iroquois, Adams, Brown, Pike, Tazewell Counties and, as funds allow, other counties within the Illinois River Basin will be digitized. In future years, the photographs may be rectified so that they can be used in a GIS environment. *Estimated at 268 person days at $150,000. Contracting of significant portions of this task is planned.*

1.3.2 Conservation Mapping. This task will compile information on existing conservation measures in the Illinois River Basin into a GIS system. The database will provide information on the location, types, and amount of restoration that has been conducted in various parts of the basin.

The State of Illinois, as a partnership between the USDA Farm Services Agency, ILDNR, University of Illinois Extension, and several county Soil and Water Conservation Districts, has already implemented an Illinois Conservation Practices Tracking System (ICPTS) in eight central Illinois counties (Knox, Schuyler, Fulton, Cass, Sangamon, Christian, Menard, and Logan). Through this project, over 3,000 conservation easements through CRP, CREP, WHIP, and EQIP have been mapped into an ESRI ArcView environment with parallel tables and attribute files that document practice type, agency, land use, contract period of time, and other pertinent data. Additional conservation mapping in support of the Illinois River Ecosystem Restoration Program should be done using similar mapping protocols so as to build a single, comprehensive Illinois River conservation practices information system that will also complement work being done elsewhere in the state. Additional funding will allow investigators to expand to additional counties in the Illinois River Basin and also include EPA, Corps, county, USFWS, and non-governmental organization conservation projects. *Estimated at 178 person days at $100,000, including estimated in-kind services of $10,000. Contracting of significant portions of this task is planned.*

1.3.3 Sedimentation Surveys and Sediment Characterization. Sediment deposition in the backwaters, side channels, and sloughs along the Illinois River and its major tributaries is a primary concern of this restoration effort. A scientific study by the Illinois State Water Survey (ISWS) based on the field data collected in the 1970's estimated that on the average backwater lakes lost more than 70 percent of their 1903 capacity. However, no new sedimentation surveys for most areas have been conducted since the 1970's. This task will conduct an overall sedimentation survey complemented by limited sediment characterizations. Effort will begin with Peoria Pool backwater lakes. This task will include complete bathymetric characterization of five backwater areas and sediment coring to estimate the characteristics and depth sediment deposition. *Estimated at 450 person days at $250,000. Contracting of portions of this task is planned.*

1.3.4 Short-Term Special Studies and Monitoring. This task will implement focused research studies recommended by the monitoring program panel to address specific critical ecological questions. The initial short-term special study would digitize historic maps of the Illinois River, and further studies will be developed as critical questions arise. *Estimated at 190 person days at $100,000. Efforts would continue and expand after FY 03.*

1.3.5 Digitize Historic Maps. This task involves reviewing, digitizing, and analyzing historic maps and information on the Illinois River. One significant set of maps is the Woermann Maps, created in 1902–1904 by J. W. Woermann for the U.S. Army Corps of Engineers. These maps contain detailed bathymetry and topography of the entire Illinois River from its confluence with the Mississippi River to approximately the Lockport Lock and Dam at river mile 291. The topography is in 1-foot intervals, and the bathymetry is typically in 500-foot bands. The bathymetric survey was extremely detailed, covering the main channel, side channels, and even many lakes (some that were not even connected to the river at that time).

Because these data are so detailed, they have already proven useful in many studies. Most recently, the Rock Island District digitized all of the bathymetry and some of the topography for the Peoria lake area and used these data to create a detailed Triangulated Irregular Network (TIN) of the lake. This surface was compared with other time periods to provide a rate of sedimentation for the lake. When the remaining maps are digitized, the data will become invaluable to many agencies for numerous studies on the river. Digitizing will begin by continuing efforts in Peoria Pool. In the future, these data would be compared to the sediment survey and characterization data collected for a detailed understanding of change. *Estimated at 90 person days at $50,000. Contracting of significant portions of this task is planned.*

2.0 Critical Restoration Projects. This section includes the efforts to evaluate the six ongoing projects as well as identifying and evaluating new Critical Restoration Projects.

2.1 Initial Critical Restoration Projects. This section covers all activities related to Critical Restoration Project development and analysis. The following tasks describe activities and estimated study levels for the six initial Critical Restoration Projects. In FY01 and 02, the Illinois River Ecosystem Restoration Feasibility Study funded approximately $600,000 ($100,000 in FY01 and approximately $500,000 in FY02) of work on the initial Critical Restoration Projects described below before their realignment under Section 519. These investigations will be complete feasibility reports covering environmental compliance (NEPA – EAs and permits), real estate, PCAs, etc. for each Critical Restoration Project. *The total estimated cost to bring these projects through feasibility and PED is $3,947,000 with $210,000 in in-kind services. This includes $3,062,000 for the feasibility level study efforts (this PMP covers roughly $500,000 less than this amount due to the fact that these efforts were funded under the Illinois River Ecosystem Restoration Study until spring 2002).*

More detailed internal PMPs will be developed for each Critical Restoration Project to formalize the cost estimates and schedules. In addition to the feasibility funding shown, plans and specifications will be prepared subsequent to approval. *Estimated at $1,385,000.* First stage construction cost estimates of $1,250,000 are shown on the spreadsheet; however, separate PCAs and Construction General funding would be required to cover this work.

2.1.1 Waubonsie Creek. A feasibility study will be conducted to evaluate the potential to provide fish passage at dams at the lower end of Waubonsie Creek and restore instream habitat. This effort is consistent with system goals of increasing connectivity of aquatic habitats, restoring degraded habitats, restoring floodplain habitat, and maintaining viable populations of native species. The task will be performed by the Rock Island District's Project Management Division, Engineering Division, and Real Estate Division and cost $555,000. The ILDNR participation in the feasibility evaluation is anticipated to cost $30,000 and will be performed as in-kind services. *The entire feasibility study will cost $585,000. In addition, $300,000 in Plans and Specifications (PED) work is anticipated, including an additional $5,000 as in-kind services.*

2.1.2 Pekin Lake. A feasibility level study will be conducted to evaluate the potential to restore backwater habitat in Pekin Lake. This effort is consistent with system goals of selectively removing sediment, increasing connectivity of aquatic habitats, restoring floodplain habitat and function, naturalizing hydrologic regimes, protecting high quality habitats, and maintaining populations of native species. The task will be performed by the Rock Island District's Project Management Division, Engineering Division, and Real Estate Division and cost $592,000. The ILDNR participation in the feasibility evaluation is anticipated to cost $30,000 and will be performed as in-kind services. *The entire feasibility study will cost $622,000. In addition $450,000 in Plans and Specifications (PED) is anticipated, including an additional $5,000 as in-kind services.*

2.1.3 Iroquois River. A feasibility level study will be conducted to evaluate the potential to stabilize the Iroquois River and Sugar Creek and to restore floodplain wetlands along the Iroquois River and a tributary stream. This effort is consistent with system goals of reducing sediment delivery of tributaries, increasing connectivity of aquatic habitats, and restoring degraded habitats. The task will be performed by the Rock Island District's Project Management Division, Engineering Division, and Real Estate Division and cost $445,000. The ILDNR participation in the feasibility evaluation is anticipated to cost $30,000 and will be performed as in-kind services. *The entire feasibility study will cost $475,000. In addition, $225,000 in Plans and Specifications (PED) is anticipated, including an additional $5,000 as in-kind services.*

2.1.4 McKee Creek. A feasibility level study will be conducted to evaluate the potential to address stream stability, sediment delivery, and water retention. This effort is consistent with system goals of reducing sediment delivery, reducing sediment deposition, and improving water quality. The task will be performed by the St. Louis District's Project Management Division, Engineering Division, Real Estate Division, and/or a contractor and cost $570,000. The ILDNR participation in the feasibility evaluation is anticipated to cost $30,000 and will be performed as in-kind services. *The entire task will cost $600,000. In addition, $300,000 in Plans and Specifications (PED) is anticipated, with $215,000 budgeted for FY 03, including an additional $5,000 as in-kind services.*

2.1.5 Blackberry Creek. A feasibility level study will be conducted to evaluate the potential to provide fish passage at the dam near the confluence with the Fox River. This effort is consistent with system goals of increasing connectivity of aquatic habitats, and maintaining viable populations of native species. The majority of the task will be performed by a contractor. Contractor administration and technical review will be conducted by Rock Island District's Project Management Division, Engineering Division, and Real Estate Division, and/or a contractor and cost $245,000. The ILDNR participation in the feasibility evaluation is anticipated to cost $30,000 and will be performed as in-kind services. *The*

entire feasibility study will cost $300,000. Contracting of significant portions of this task is planned. In addition, $150,000 in Plans and Specifications (PED) is anticipated, with $100,000 budgeted for FY 03, including an additional $5,000 as in-kind services.

2.1.6 Kankakee River – Mainstem. A feasibility level study will be conducted to evaluate the potential to address the high sediment load of the Kankakee River and resulting habitat impacts. This effort is consistent with system goals of reducing sediment delivery, reducing sediment deposition, and protecting and restoring high quality habitats. The task will be performed by the Rock Island District's Project Management Division, Engineering Division, and Real Estate Division and cost $450,000. The ILDNR participation in the feasibility evaluation is anticipated to cost $30,000 and will be performed as in-kind services. *The entire feasibility study will cost $480,000. In addition, $225,000 in Plans and Specifications (PED) is anticipated, with $95,000 budgeted for FY 03, including an additional $5,000 as in-kind services.*

2.2 Future Critical Restoration Project Needs. As system study tasks further define the need for future system restoration and as a Critical Restoration Project formulation process is put in place, additional Critical Restoration Projects will be identified, evaluated, and selected for investigation. The following tasks provide for the reconnaissance level and feasibility level evaluations of these additional project sites. *These tasks are estimated to cost $1,050,000, including estimated in-kind services of $65,000.*

2.2.1 New Project Fact Sheets and Assessment. Fact sheets and initial assessments will be developed for the Critical Restoration Projects selected through the prioritization process. Assuming the selection of two additional sites in FY02 and four additional sites in FY03, the total e*stimated cost is $150,000, including estimated in-kind services of $15,000.*

2.2.2 New Project Feasibility. Two new Critical Restoration Projects identified through the identification, evaluation, and prioritization process in FY 02 will undergo a feasibility level assessment in FY03. *Estimated at 1,700 person days at $900,000, including estimated in-kind services of $50,000.*

3.1 Immediate Monitoring Needs. Immediate system monitoring needs include the collection of additional sediment, stream flow, and biological data. Once the Monitoring Needs Study Team is initiated (task 1.1.1), they will develop detailed recommendations for any critical monitoring that should be initiated concurrent with the Comprehensive Plan. The following tasks are estimates of initial needs for FY03, but the actual work to be conducted will be refined as the system monitoring tasks are undertaken. *The total cost is estimated at $500,000.*

3.1.1 Systematic Hydrologic Gaging. This task will encompass design and implementation of a network of hydrologic gages to assess ecosystem functions, develop future projects, and monitor project performance. As excessive sedimentation is one of the major sources of ecosystem degradation, quantification of the movement of sediment through the Illinois River system is critical in defining the extent of the problem and helping set goals for reduction. The current sediment gage network consists of only 2 gages on the mainstem and 15 other gages spread through the 24,500-square-mile basin. In this task, an expanded network of sediment gages will be designed and installed that will track the movement of waterborne sediment throughout the year. Also, flow gages will be installed at strategic locations to assess the characteristics of basin response at various spatial scales and locations. The siting and distribution of all of these gages will be determined by the Corps of Engineers in consultation with the USGS and the ILDNR and are likely to be placed in

locations where crucial processes are known to occur and in the vicinity of potential future projects. These gages will be located in each of the ecophysiological provinces as delineated in the RNA and will be designed to augment existing data sources to provide as complete an understanding as possible of the behavior of critical elements within each province.

FY03 Estimated: Design of hydrologic gage network = $20,000 or approximately 18 person days. Installation of initial network gages = $229,000. Data collection from initial gages = $51,000. Total = $300,000.

Out-year commitment = Installation of additional sediment gages = $40,000 each

Installation of additional flow gages = $30,000 each

Support of sediment gages = $24,000 per year per gage

Support of flow gages = $10,400 per year per gage

3.1.2 Critical Biological Monitoring. This task will involve the implementation of monitoring tasks recommended as part of the Long-Term Resource Monitoring Plan Development task. Depending on the progress of that task, implementation may begin as early as FY03.

There are substantial needs for ecosystem monitoring throughout the Illinois River Basin, and long-term ecosystem monitoring is outlined as an integral component of the Illinois River Basin Restoration legislation. A panel of regional experts will convene to determine the ecosystem functions that drive the system and then assess the parameters that best reflect each of them. These parameters will provide the basis for analyzing the state of the system as a whole and as such define the monitoring needs. Factors such as the rate of change of these parameters and their scale of influence in relation to the total basin area will be considered to determine the amount and types of monitoring activities necessary to track the state of the system over time.

Another important information need is an assessment of the ecological response to restoration projects. A portion of the funds received for Illinois River Basin Restoration monitoring will be specifically designated to evaluate plant and animal responses to restoration projects. The methods will have to be tailored to each individual approach to restoration. Over time, the response monitoring may provide the information to reliably predict responses and thus lessen the need for such monitoring in the future. *Estimated at 400 person days at $200,000. Contracting of significant portions of this task is planned.*

PMP Task Spreadsheet

7.0 SCHEDULES AND MILESTONES

A detailed schedule is attached (Attachment 2) and will be maintained through the study to show relationships and durations of specific tasks. However, the overall timing of the efforts is reflected in the major milestones summarized below.

Execute Feasibility Cost Sharing Agreement	May 30, 2002
Receive State Funds and Initiate	June 15, 2002
Feasibility Study Conference #1 (Scoping Meeting with HQ)	June 30, 2002
Interim Report to Congress	July/August 2002
Feasibility Study Public Workshop	September 2002
Final Feasibility Reports on Initial Critical Restoration Projects	October 2002
Feasibility Study Conference #2	January 2003
Alternative Formulation Briefing	June 2003
Draft Comprehensive Plan Report and Public Review	August/September 2003
Final Public Meeting	September 2003
Final Comprehensive Plan Report	October 2003
Division Commander's Public Notice	November 2003

8.0 PERFORMANCE MEASUREMENT

Measurement of cost and schedule performance is vital to determining work progress. During the project management planning process, a cost and schedule baseline will be established. This PMP establishes the baseline subdivided into products and sub-products so that completion of work can be readily identified. The performance of task completion will be measured using PROMIS (Project Management Information System), drawing cost data from the Corps of Engineers Financial Management System and ILDNR expenditure submittals and schedule information from a Network Analysis System (NAS).

Progress on tasks will be assessed monthly. Significant changes and deviations from the schedule will be reported at the monthly Project Review Board (PRB).

9.0 ACQUISITION PLAN

A number of tasks outlined in this PMP will require acquiring support from outside sources (contractors, other Federal agencies, etc.) to provide necessary assistance and specialized skills. A variety of mechanisms will be utilized to obtain contracts, agreements, and interagency funds transfers.

10.0 RISK MANAGEMENT

Risk will be minimized through the use of the schedules, metrics, and assignment of specific responsibilities. Potential areas of risk include Federal and State of Illinois funding levels, timeliness of approvals, contract award and delivery delays, and public perception issues. Monthly reviews by the study team of contract progress and deliverables will assess potential problems and develop appropriate actions. Limits to the study team's ability to perform include Federal and State of Illinois funding levels. Contingencies to manage financial risk have bee incorporated in the cost estimates for each item.

11.0 CHANGE MANAGEMENT PROCESS

The study framework will be used to track project performance of the schedule, cost, quality, etc. Significant changes will be reported at the monthly Rock Island District PRB meetings. In addition the Executive Committee and Steering Committee meetings will be held on a regular basin to discuss, coordinate, and review any changes.

Change requests can be presented in the form of verbal or informal requests; however, as a best practice, proposed changes should be formally recorded in order to facilitate the understanding of the intent of the proposed change. When a threshold is broken in the following categories—scope, schedule, and cost—then a Schedule and Cost Change Request (SACCR) form can be used to document the impacts.

	Change Management Thresholds
Scope	When the defined scope changes direction of the study (major shift, addition or deletion of tasks, etc.)
Schedule	When a schedule change affects the overall study completion date to the extent it affects preparation for a particular WRDA or enters an additional FY.
Cost	When total costs increase for the project, or when a Comprehensive Plan or Critical Restoration Project product exceeds its estimate by 15 percent.

The SACCR also documents the proposed changes and provides the rationale for approving changes that exceed the project's baseline performance measurement thresholds. SACCRs should be posted to the project in P3e when P3e is implemented. The PM will gather sufficient information to analyze the proposal and potential solutions, considering the impact of changes for all of the project's baseline performance measures in order to insure that all changes are coordinated across the entire project. The analysis will be distributed to the appropriate decision maker(s), if other than the PM. The Study Manager will communicate the decision to the Executive Committee and Project Review Board for all project changes and those that require that the PMP be re-approved by the project sponsor. Format for the SACCR can be found at the following address, http://www.hnd.usace.army.mil/p2/tutor/REF8009.htm. All changes will be tracked in the following table.

Date	Description	Location of Change Request

12.0 QUALITY CONTROL PLAN (QCP)

A. Introduction

The Rock Island District is responsible for ensuring that this report conforms to all current professional practices and standards. This task will be conducted by an internal technical review report, prior to its submission to MVD and HQUSACE. Policies and procedures defining the quality control/internal technical review process are specified in ER 1110-1-12, *E&D Quality Management*, 1 June 1993; EC 1165-2-203, *Technical and Policy Compliance Review*, 15 October 1996; the Rock Island District's *Quality Management Plan*, 1 September 1999; Memorandum CELMV-ET, Lower Mississippi Valley Division, Directorate of Engineering and Technical Services, Quality Control and Quality Assurance Guidance, 23 September 1995; and *LMVD Plan for Transition to Metric (SI) in Planning, Engineering, and Design*. A copy of the Rock Island District's *Quality Management Plan* and QCP will be provided to the non-Federal sponsor.

B. Quality Control/Internal Technical Review Responsibilities

The goal of the technical review process is to ensure that the report and its sub-components meet the technical standards and regulations of the Corps of Engineers. The Rock Island District is responsible for the independent technical review of the feasibility study and its products and will develop and implement a QCP for the project. The QCP includes the independent technical review of decision and implementation documents, consistent with established criteria, guidance procedures, and policy; and identifies how the District plans to ensure compliance with technical and policy requirements.

C. Technical Review Process

Technical review is part of the overall development of implementation and decision documents and is the systematic execution of actions, decisions, and reviews taken during the concept development, formulation of alternatives, and project design phases to ensure conformance with laws and Administration policy. An independent technical review is conducted for all decision and implementation documents and is independent of the technical production of the project/product.

The selected independent technical review methods are identified in this QCP. The technical review team members have the proper knowledge, skills, and experience necessary to perform their tasks and are independent of the project team responsible for the development of the project/product. The QC/QA process as described herein will be fully documented in the feasibility study. Documentation and certification of technical/legal review will accompany the feasibility report that is submitted to MVD and HQUSACE for policy compliance review.

The Rock Island District will apply all appropriate technical and policy guidance in developing the Illinois River Basin Restoration Study. Since the District is responsible for both conducting the work and providing the technical review of the work, the technical review will be independent. Independent review will include review of all the technical work and products from plan formulation, environmental, economics, engineering, cost estimating, real estate, and other disciplines that are essential to achieving a quality feasibility report. A QCP has been prepared for this product and is documented in this PMP. The QCP includes the following items:

1. Discussion of the selected independent technical review option that identifies the review team members, qualifications, and rationale for selection.

2. Schedule of in-progress technical and/or policy reviews.

3. Description of the process for documenting decisions, issues, and issue resolution.

4. Discussion of the methods to be used to resolve significant technical and other policy issues.

5. Discussion of the lessons learned process.

6. Legal review of the decision document and associated NEPA compliance document by District Counsel.

7. Any issues that cannot be resolved within the District will be forwarded to MVD and HQUSACE for resolution.

C.1 Planning, Programs, and Project Management Division

Environmental Resources - Portions of work performed to produce the environmental analysis and NEPA document may be done using a contractor. As such, the quality control process will be in two steps. This first step will be by the contractor, who will conduct the review in accordance with their internal QA/QC procedures. A copy of EC 1165-2-203 will be provided to the contractor to ensure that their internal QA/QC procedures conform to the Corps of Engineers' requirements.

The second step in the QA/QC process will be performed by the Corps planning review team members, who will review the contractor's work to ensure that it conforms to the requirements set forth in the PSP and other Corps regulations. A POC for environmental work and cultural resources work and alternates will be appointed as necessary.

Economic and Social Analysis - Quality control and technical review of the economic, social analysis, and financial analysis work will be performed by the Chief, Economic and Social Analysis Branch or a designee. An alternate will be assigned at a later date if necessary.

Plan Formulation - Plan formulation and preparation of the Comprehensive Plan will be performed under the direction of the Project Manager. The Chief of the Project Management Branch will review plan formulation and serve as the leader of the technical review team. The Chief, Project Management Branch will review the main report for compliance with policy.

C.2 Engineering Division - The Engineering Division will review the draft Comprehensive Plan. A back check review of the final engineering appendix will be conducted. The review team will consist of individuals from the following fields: civil design, environmental engineering, structural, geotechnical, cost estimating, hydraulics and hydrology. Corps of Engineers criteria will be used to judge the technical adequacy of the products and documentation will be accomplished by written comments, responses, and correspondence.

C.3 Review Process - Each technical element will schedule sufficient time for a technical review to allow their appendix to be submitted in accordance with the currently approved PMP. In order to accomplish this, each technical element will conduct its quality control on a continual basis with each major sub-product serving as a checkpoint in the quality control process. This will ensure that any technical mistakes are found early and resolved while the material is fresh in the

minds of those working on it. For work performed by a contractor, each contract scope of work will require several work progress updates and submissions prior to the submission of the draft report and final report. These progress updates will serve to ensure that the contractor is proceeding in the direction that the Corps wishes to pursue and raise any issues that may need to be resolved.

Checklists will be used in the quality control process to assist the reviewer, but will not be used to replace that person's technical expertise or judgment. The checklists are designed to assist the reviewer in ensuring that the report contains the minimum amount of material necessary to make decisions and that any conclusions drawn in the report are based on the information provided.

Reviewers will document their comments on review sheets (NCR Form 44). At a minimum, each comment will refer to the page and paragraph in question, the nature of the problem, where guidance can be found that applies to the problem, and, if possible, a suggested solution to the problem. The comments and any checklist used will be returned to the person responsible for the product to resolve. Responses to each comment will provide, at a minimum, what was done to correct the deficiency and where the deficiency was corrected, or a justification for why the deficiency was not corrected. The package of comments and responses will be attached to the final submission as a sub-appendix. It is the responsibility of the section supervisor responsible for the product to review the comments and responses to ensure that all issues are resolved.

Each first-line supervisor has the responsibility for the day-to-day quality control of those they supervise. As such, they are directly responsible for checking the day-to-day work of their subordinates and resolving any issues that the review team members may raise.

C.4 Additional Quality Control Measures - In addition to the steps described above, three quality control (and/or in progress review) meetings will be held during the course of the study. The purpose of these meetings will be for the branch chiefs and other team members to gain an understanding of what the project team has produced and provide comments and raise issues at the appropriate time. The review team members will provide their written comments on the main report at this time. The three briefings are:

a. Without-Project Conditions

b. With-Project Conditions

c. Alternative Selection (Note: This briefing also will include participants from the Rock Island District's PRB, MVD, HQUSACE, the non-Federal sponsor, and Federal and State environmental agencies, as appropriate.)

C.5 Approval of Quality Control/Internal Technical Review Plan - Approval of the quality control/internal technical review plan will be done concurrently with the approval of the PMP. Individuals who are named in this plan as reviewers or alternates will provide their acknowledgment of this responsibility on the attached form.

QUALITY CONTROL REPORT

ROCK ISLAND DISTRICT - PLANNING, PROGRAMS, AND PROJECT MANAGEMENT DIVISION

Illinois River Basin Restoration, Comprehensive Plan

1. I certify that the study and project review was performed and that the study and recommended project meet all Corps regulations and requirements related to water resources planning.

Planning, Programs, and Project Management Review Team

_____ _____
Date

Chief, Economic and Environmental
Analysis Branch

_____ _____
Date

Archeologist

_____ _____
Date

Project Manager

2. I certify that the study and project review process required to be performed under my responsibility has been completed and the subject study and recommended project meet all Corps regulations, requirements, and customer expectations.

_____ _____
Date

Chief, Project Management Branch

STUDY/PROJECT REVIEW CERTIFICATION

PLANNING, PROGRAMS, AND PROJECT MANAGEMENT DIVISION

I certify that the study and project review process required to be performed under my responsibility has been completed and that the study and recommended project meet all Corps regulations, requirements, and customer expectations.

_____ _____
Date

Chief, Project Management Branch

_____ _____
Date

Chief, Engineering Division

_____ _____
Date

Chief, Real Estate Division

_____ _____
Date

District Counsel

_____ _____
Date

Chief, Planning, Programs, and
Project Management Division

_____ _____
Date

Colonel, Corps of Engineers
District Engineer

QUALITY CONTROL PLAN

ROCK ISLAND DISTRICT – PLANNING, PROGRAMS, AND PROJECT MANAGEMENT DIVISION

OVERVIEW, BASIC CONCEPTS, AND APPLICABILITY

I. Overview

This Quality Control Plan (QCP) has broad application to most of the Rock Island District's Planning, Programs, and Project Management Division General Investigations (GI) functions. This QCP may be expanded, contracted, or otherwise modified based on the risk, cost, complexity, and uniqueness of the effort being undertaken. However, this model and each variation are expected to:

A. Explain the concept of how the QCP is integrated with and complements existing structures such as the Project Review Board (PRB) and existing management tools such as Project Management Plans (PMPs) without usurping the functional responsibilities of Project Managers (PMs) or their chains of command.

B. Establish a concept and process for identifying a specific set of assignments for an independent Technical Review Team not directly involved in the production of the work products to participate in the life-cycle progress of the study/project.

C. Provide a "checklist" or similar tool to aid the Technical Review Team in their mission of assuring that significant items and issues are not overlooked.

II. Basic Quality Control Concept

Quality control is assured by a multi-discipline, multi-layer, life-cycle approach. Successful Planning products are the result of the insights and expertise of a diverse array of professionals, including the active participation of local sponsors and representatives from the pertinent agencies. Work efforts are conducted either by the non-Federal sponsor, A-E, other districts, or by in-house technical staff. If the primary technical work is conducted outside the District, one layer of review will take place by the contractor before the report is transmitted to the Rock Island District.

The District Study/Project Team members will conduct a second layer of review of the contractor's work products. The next layer of review involves the functional managers (branch or section chiefs) of the Project Team members to assure some degree of completeness, correctness, and consistency since a portion of the functional responsibility for the end-product lies with the technical worker's first line leader or supervisor. This first-line supervisor is intimately involved in the progress of the effort and will not serve as the Technical Review Team Member for his/her discipline wherever possible. Branch Chief and Division Chief level (overview/policy) reviews are also conducted, and they tend to exhibit a greater degree of independence and objectivity than previous layers since they are not involved in the day-to-day production activities. This layer is routinely accomplished as Division Chiefs provide PRB recommendations and approvals. This QCP establishes a separate, independent Review Team as specified on a subsequent page.

The Quality Control Team (QCT) participates in the entire life-cycle of the study/project.

A. The QCT contributes to and reviews the PMP at its inception.

B. The QCT provides an intermediate review as major interim products/decisions are reached.

C. Specific interim points requiring QCT review are:

1. Definition of without-project conditions.

2. Definition of with-project conditions.

3. Alternative formulation and screening of alternative plans.

D. The QCT will provide a thorough review of draft and final products and identify and resolve problems in conjunction with the Project Team before recommending PRB approval.

Written comments from the QCT will be addressed to the Project Team for resolution. These comments are compiled as part of the Quality Control Report to indicate the issues and concerns that were raised and addressed along the course of the study. Unusual issues or conflicts that cannot be resolved by the Study and Review Teams may be addressed to an appropriate resource in MVD for guidance.

III. Responsibility

The Review Team is required to certify the results of their review as indicated on the enclosed Certification Form within the Quality Control Report.

Project Team members, Project Managers, and Functional Chiefs still retain responsibility for the quality and timely execution of the study/project tasks in accordance with milestones, costs, and commitments as identified in the PMP. The Review Team provides ancillary quality control, not replacement of existing responsibility for technically accurate, high-quality work products.

The District PRB retains its responsibility for approving Rock Island District products. The QCP should enhance the quality of the District's work products and instill more confidence in PRB members as they improve such products.

IV. Technical Review Team

The Technical Review Team will focus on:

A. Assumptions.

B. Methods, procedures, and material used in the analysis based on the study/project scope.

C. Alternatives evaluated.

D. Appropriateness of data used and level of data obtained.

E. Reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing policy.

V. Checklists

A checklist for review of Feasibility Reports is enclosed in the QCP. It is meant to be an available tool to assist the Review Team Member, not to replace his/her technical expertise or judgment (see next page).

VI. Planning, Programs, and Project Management Review Team Assignments

Standing assignments for the most common planning products are currently in place within Planning, Programs, and Project Management Division with a plan formulation technical specialist and a regional economist already fulfilling this quality control function. The plan for independent review of environmental products is to have a senior environmentalist/archaeologist with significant Corps experience, but with little or no involvement in working on the specific study's day-to-day activities. Specific team member names will be provided at the inception of the study as Study/Project Team and Review Team members are identified. Review team assignments for technical support outside of the Planning, Programs, and Project Management Division must be provided by those other offices at the appropriate time.

CHECKLIST FOR REVIEW OF FEASIBILITY REPORTS

1. Has the study been conducted in accordance with and fully responsive to the study authority?

2. Is the study area, as defined, reasonable and consistent with the study authority?

3. Have the areal extent and severity of the water resources problems and without-project conditions been clearly documented?

4. Are current findings consistent with prior phases of study? Have intervening external factors (such as regulation changes, significant storm events, etc.) jeopardized previous logic, analyses, and conclusions?

5. Have the assumptions and rationale for the without-project condition been explicitly stated and are they reasonable?

6. Are planning objectives clearly identified?

7. Were the views of non-Federal interests solicited and considered in the plan formulation process?

8. Have all reasonable structural and nonstructural plans, including a no action plan, been considered? Do they fully address the identified problems and needs?

9. Was the plan formulation analysis conducted in accordance with accepted techniques and appropriate guidelines and regulations?

10. Was the environmental work conducted in accordance with appropriate techniques, guidelines, and regulations?

11. Was the economic/benefit analysis conducted in accordance with accepted techniques, guidelines, and regulations?

12. Has the NED plan been identified? Is it the selected/recommended plan?

13. For environmental restoration efforts, was a cost effectiveness and incremental analysis accomplished? Was resource significance defined?

14. Is there a rationale for a locally preferred plan or non-NED recommended plan?

15. Does the recommended plan meet the customer's needs and has the position of the sponsor been explicitly conveyed?

16. Have upstream and downstream effects of the recommended plan been identified?

17. Have all known benefits been included in the benefit estimate? Have high-priority benefits been identified?

18. Have economic methodologies and assumptions been explained in sufficient detail?

19. Is the evaluation of each alternative based on the difference between the without-project and with-project conditions?

20. Have risk and uncertainty been addressed in accordance with ER 1105-2-101?

21. Has the necessary coordination been conducted and documented in accordance with the National Environmental Policy Act of 1969 (NEPA) and ER 200-2-2?

22. Have HTRW considerations been addressed?

23. Is the proposed project recommendation consistent with current administration policies?

24. Does the overall Planning report adequately display study assumptions and findings, as well as clearly represent a firm basis for the recommendation?

PLANNING DECISION DOCUMENT
Technical and Policy Compliance Checklist

Name of Project: Illinois River Basin Restoration, Comprehensive Plan

SIGNATORY OR REVIEWING OFFICER	SUBMISSION RECOMMENDED FOR APPROVAL	DATE	REVIEW ITEM REF. NCR QMP	REMARKS/ DOCUMENTATION
PLANNING, PROGRAMS & PROJECT MGMT				
PROJECT MANAGER			SPONSOR COORDINATION AUTHORITY FUNDING PDA PACKAGE PERMIT PACKAGE TECH REVIEW	
BRANCH CHIEF (REVIEW)			PROJECT SUFFICIENCY	
PM-A			ENVIRONMENTAL ANALYSIS (EA) NEPA, ENDANGERED SPECIES ACT	
PM-A (REVIEW)			PROJECT SUFFICIENCY	
PM-A			ECONOMIC ANALYSIS	
PM-A (REVIEW)			PROJECT SUFFICIENCY	
ENGINEERING				
TECHNICAL MANAGER			DESIGN CONSIDERATIONS R.O.W. QUANTITIES/COST ESTIMATE INPUT HTRW ASSESSMENT	
SECTION CHIEF (REVIEW)			DESIGN/CONSTRUCTION SUFFICIENCY	
ED-C (REVIEW)			COST ESTIMATE	
ED-G (REVIEW)			GEOTECHNICAL	
ED-H (REVIEW)			H&H CONSIDERATIONS	
ED-D			PROJECT SUFFICIENCY	
REAL ESTATE				
RE-A			REAL ESTATE ANALYSIS	
RE-A			R.O.W. COORDINATION CONTRIBUTED FUNDS COORDINATION DRAFT PCA	
RE-A (REVIEW)			PROJECT SUFFICIENCY	
RE - CHIEF			PROJECT SUFFICIENCY	
OPERATIONS				
OD - CHIEF			PROJECT SUFFICIENCY	
OFFICE OF COUNSEL				
OC - CHIEF			LEGAL SUFFICIENCY	
PLANNING, PROG & PROJ MGMT DIV				
PM - CHIEF			PROJECT SUFFICIENCY	
ED - CHIEF			PROJECT SUFFICIENCY	

THE PRODUCT SUBMISSION HAS BEEN REVIEWED FOR TECHNICAL AND POLICY COMPLIANCE AND IS RECOMMENDED FOR APPROVAL. TECHNICAL AND POLICY REVIEW ISSUES HAVE BEEN RESOLVED.

_____ (DATE)_____
CHIEF, PLANNING, PROGRAMS, &
PROJECT MANAGEMENT DIVISION

THE PRODUCT SUBMISSION IS APPROVED. THE ADMINISTRATIVE/REGULATORY REQUIREMENTS HAVE BEEN COMPLETED AND IMPLEMENTATION OF THIS PROJECT SHOULD PROCEED.

_____ (DATE)_____
COLONEL, CORPS OF ENGINEERS
COMMANDING

QUALITY CONTROL REPORT

ROCK ISLAND DISTRICT - PLANNING, PROGRAMS, AND PROJECT MANAGEMENT DIVISION

Illinois River Basin Restoration, Comprehensive Plan

Overview

This report synopsizes the Quality Control and Review Process to be employed during the development of the Illinois River Basin Restoration, Comprehensive Plan. In light of the changes in review functions on the Division and Headquarters levels in recent years, the responsibility for review of technical products rests with the District. Each operating Division in the District has developed its own functional procedures and identified its own Project Team and Review Team members for quality control of its areas of technical expertise.

Project Team and Review Team Assignments

Discipline	Project Team Member	Review Team Member (Name)
Project Management	PM-M Project Manager	
Plan Formulation	PM-M	
Economic Analyses	PM-A Economist	
Cultural Analysis	PM-A Archeologist	
Environmental Analysis	PM-A Biologist	
Real Estate	RE Realty Specialist	
Design/Eng. Coordination	ED Project Engineer	
H&H	ED Hydraulic Engineer	
Surveys	ED Land Surveyor	
Geotechnical	ED Geotechnical Engineer	
Cost Estimating	ED Estimator	
Environmental Engineering	ED Environmental Engineer	

QUALITY CONTROL REPORT

ROCK ISLAND DISTRICT - PLANNING, PROGRAMS AND PROJECT MANAGEMENT DIVISION

Illinois River Basin Restoration, Comprehensive Plan

Documentation of Technical Review Process

Meetings Attended by Review Team

	Date	Review Team Member	Issue	MFR Attached
1				
2				
3				

Review Team Comments for Interim and Final Submittals

	Date	Review Team Member	Issue	Resolution
1				
2				
3				
4				

Additional Comments Attached

Key Items Addressed by Review Team

a) Validity of technical assumptions
b) Methods and procedures used in the analyses
c) Reasonable alternatives were addressed
d) Appropriateness of data used
e) Reasonableness of the results and responsiveness to customer needs

If a formal checklist has been used by the reviewer, it is attached.

QUALITY CONTROL REPORT

ROCK ISLAND DISTRICT - PLANNING, PROGRAMS, AND PROJECT MANAGEMENT DIVISION

Illinois River Basin Restoration, Comprehensive Plan

Certification by Review Team Members

I certify that the study and review process required to be performed under my responsibility has been completed and the technical work is generally in accord with Corps regulations, standard report requirements, and customer expectations.

Review Team Member	**Date**
_____	_____
_____	_____
_____	_____
_____	_____

QUALITY CONTROL REPORT

ROCK ISLAND DISTRICT - PLANNING, PROGRAMS, AND PROJECT MANAGEMENT DIVISION

Illinois River Basin Restoration, Comprehensive Plan

Endorsement by Office Chiefs

My staff and I have reviewed the report and the recommendations of the Study/Project and Review Teams. I endorse the report and recommend its signature by the District Engineer and its continued processing through the Corps approval process.

_____

Chief, Planning, Programs & Project Management Division

_____

Chief, Engineering Division

_____

Chief, Real Estate Division

_____

Office of Counsel

13.0 CLOSEOUT PLAN

This section was taken from the Project Management Business Process Manual and modified for this project. Additional information and references are available at http://www.hnd.usace.army.mil/p2/.

Complete Date	Checklist with Responsibility Assigned (in parentheses)
	1. Ensure PDT reviews unliquidated obligations and commitments in CEFMS for completed activities (SM)
	2. Clear outstanding obligations and commitments (PDT)
	3. Close work items/reallocate funds, if appropriate (PDT)
	4. Turn over to the customer the completed product (SM)
	5. Ensure PDT completes all closeout documents including Engineer Form 3013 (e.g., contractor and A-E evaluations, A-E evaluations, and transfer documents), and that they are done in accordance with applicable regulations (SM)
	6. Complete all closeout documents and request feedback from customer. A standard questionnaire available USACE-wide, or developed by local SOP, will provide measurable feedback from our customers (PDT)
	7. Summarize Lessons Learned – PROC3020. (PDT)
	8. If all activity work items are closed, all funds reallocated to project work item, and all claims settled. Project Execution and Control – PROC3000. (PDT)
	9. Examine total expenditures for each type of funds to determine if correct cost-sharing exists. Each cost-shared project has a certain percentage that is paid by the customer in cash and/or other contributions, such as in-kind services or LERRD credits. Section 26, Cost Sharing, of the CEFMS Users Manual Also refer to ER 1165-2-131, Local Cooperation Agreements for New Start Construction Projects (SM)
	10. Process cost transfer as necessary, in accordance with cost-sharing requirements and applicable regulations, policies, and local SOPs (PDT)
	11. Organize records and store/archive properly as described in the FCSA (SM)
	12. Ensure files are maintained. These records include such things as project files, technical documents, reports, plans and specifications, financial documents, etc. (SM)
	13. Conduct an audit, if appropriate.

PDT = Product Delivery Team
SM = Study Manager

14.0 APPROVALS

I certify that this Project Management Plan (PMP) reflects the scope of the project and that I can meet the enclosed schedule and cost tables. I accept the responsibilities outlined in this plan, which reflects U.S. Army Corps of Engineers regulations and requirements and customer expectations.

PMP SUBMITTED BY:

Bradley E. Thompson, AICP Project Manager	Date
Kirk J. Sunderman, P.E. Project Engineer	Date
Chuck H. Theiling Project Biologist	Date

REVIEWED BY:

Karen J. Grizzle Real Estate Division	Date
Daniel J. Holmes, P.E. Chief, Environmental Engineering Section	Date
Roger A. Less, P.E. Chief, Project Engineering Section	Date
Dale R. Rossmiller, P.E. Chief, Design Branch, Engineering Division	Date
Joseph Raoul, Jr., P.E. Chief, Engineering Division	Date
Kenneth A. Barr Chief, Economic & Environmental Analysis Branch	Date
Teresa A. Kincaid, P.E. Chief, Project Management Branch	Date

APPROVED BY:

Kirby D. Cottrell Director, Office of Research Conservation Illinois Department of Natural Resources	Date
Gary L. Loss, P.E. Chief, Planning, Programs, & Project Mgmt Division Rock Island District, U.S. Army Corps of Engineers	Date
Joseph P. Kellett, P.E. Chief, Planning, Programs, & Project Mgmt Division St. Louis District, U.S. Army Corps of Engineers	Date
Raymond Coughenour, P.E. Chief, Programs & Project Mgmt Division Chicago District, U.S. Army Corps of Engineers	Date

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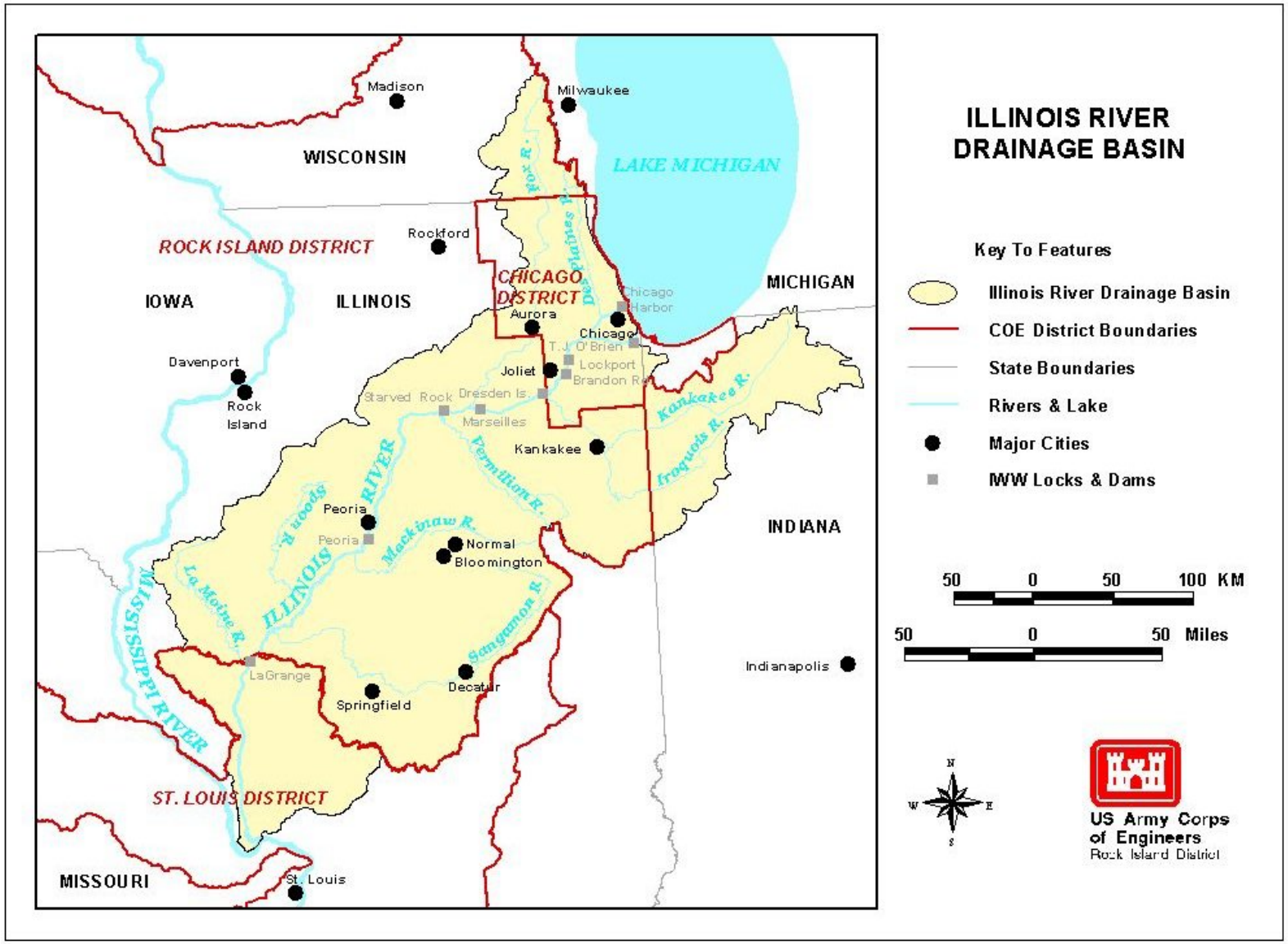

Attachment 1

Attachment 2

Detailed Schedule